# IV. Environmental Impact Analysis
# E. Greenhouse Gas Emissions

## 1. Introduction

This section compares the Project's characteristics with applicable regulations, plans, and policies set forth by the State of California, the Southern California Association of Governments (SCAG) and the City to reduce greenhouse gas (GHG) emissions to determine whether the Project is consistent with and/or would conflict with the provisions of these plans. To assist in analyzing the Project's potential to conflict with applicable regulations, plans and policies, this section also estimates the Project's GHG emissions generated by Project construction and operations, taking into account mandatory and voluntary energy and resource conservation measures that have been incorporated into the Project to reduce GHG emissions. Details of the GHG analysis are provided in the *Paseo Marina Greenhouse Gas Calculation Worksheets*, which are in Appendix B of this Recirculated Draft EIR, and are incorporated by reference.

## 2. Environmental Setting

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and severe weather events. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

Earth's natural warming process is known as the "greenhouse effect." It is called the greenhouse effect because Earth and the atmosphere surrounding it are similar to a greenhouse with glass panes in that the glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiative heat from escaping, thus warming Earth's atmosphere. Some levels of GHGs keep the average surface temperature of Earth close to a hospitable 60 degrees Fahrenheit. However, as GHG from human activities increase, they build up in the atmosphere and warm the climate, leading to many other changes around the world in the atmosphere, with associated adverse climatic and ecological consequences.[1]

[1] *USEPA, 1/19/17 Snapshot, Climate Change: Basic Information, https://19january2017snapshot.epa.gov/climatechange/climate-change-basic-information_.html, accessed July 6, 2023.*

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity, and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.[2]

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 43 percent between 1990 and 2015. In addition, in the Global Carbon Budget 2020 report, published in December 2020, atmospheric carbon dioxide ($CO_2$) concentrations in 2019 were found to be 47 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest during at least the last 800,000 years.[3] Global increases in $CO_2$ concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. Regarding emissions of non-$CO_2$ GHG, these have also increased significantly since 1900.[4] In particular, studies have concluded that it is very likely that the observed increase in methane ($CH_4$) concentration is predominantly due to agriculture and fossil fuel use.[5]

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing

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[2] *Pew Center on Global Climate Change, Climate Change 101: Understanding and Responding to Global Climate Change.*

[3] *P. Friedlingstein, et al., Global Carbon Budget 2020, (Earth System Science Data, 2020, /essd–12-3269-3340 019).*

[4] *USEPA, Global Greenhouse Gas Emissions Data, www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data, accessed July 6, 2023.*

[5] *USEPA, Atmospheric Concentrations of Greenhouse Gas, updated June 2015.*

countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.[6]

In December 2015, the US entered into the Paris Agreement which has a goal of keeping a global temperature rise this century below 2 degrees Celsius above pre-industrial levels and limit the temperature increase further to 1.5 degrees Celsius. This agreement requires that all parties report regularly on emissions and implementation efforts to achieve these goals.

Regarding the adverse effects of global warming, as reported by SCAG:

> *"Global warming poses a serious threat to the economic well-being, public health and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO2 emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO2 emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the State's population and economic activities, is also a major contributor to the global warming problem."*[7]

## a. GHG Fundamentals

GHGs are those compounds in the Earth's atmosphere that play a critical role in determining temperature near the Earth's surface. GHGs include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride ($SF_6$), and nitrogen trifluoride ($NF_3$).[8] More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy which is radiated back from the Earth towards

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[6] *United Nations Framework Convention on Climate Change, Press Release—Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change, August 31, 2007.*

[7] *SCAG, The State of the Region—Measuring Regional Progress, December 2006, p. 121.*

[8] *As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.*

space, resulting in a warming of the atmosphere. Compounds that are regulated as GHGs is provided in Table IV.E-1 on page IV.E-5.[9,10]

Not all GHGs possess the same ability to induce climate change. Carbon dioxide is the most abundant GHG in Earth's atmosphere. Other GHGs are less abundant, but have higher global warming potential (GWP) than $CO_2$. Thus, emissions of other GHGs are commonly quantified in the units of equivalent mass of carbon dioxide ($CO_2e$). GWP is based on several factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of $CO_2$, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years otherwise referred to as atmospheric lifetime) relative to that of $CO_2$.

The larger the GWP, the more that a given gas warms the Earth compared to $CO_2$ over that time.[11] These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values in its Fourth Assessment Report (AR4). The GWPs in the IPCC AR4 are used by CARB for reporting Statewide GHG emissions inventories, consistent with international reporting standards. By applying the GWP ratios, Project-related $CO_2e$ emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of $CO_2$ over a 100-year period is used as a baseline.

The IPCC has issued an updated Fifth Assessment Report (AR5), which has revised down the majority of the GWP for key regulated pollutants. As CARB still uses AR4 values and the modeling software CalEEmod is built on these assumptions, AR4 GWP values are used for the Project. Generally, the changes from AR4 to AR5 are reductions in warming potential for the GHG most associated with construction and operation of typical development projects. The GWP from AR4 and AR5 and atmospheric lifetimes for key regulated GHGs are provided in Table IV.E-2 on page IV.E-6.

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[9] *Intergovernmental Panel on Climate Change, Second Assessment Report, Working Group I: The Science of Climate Change, 1995.*

[10] *Intergovernmental Panel on Climate Change, Fourth Assessment Report, Working Group I Report: The Physical Science Basis, 2007, Table 2.14.*

[11] *GWPs and associated CO2e values were developed by the Intergovernmental Panel on Climate Change (IPCC) and published in its Second Assessment Report (SAR) in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). CARB has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.*

**Table IV.E-1**
**Description of Identified GHGs**[a]

| Greenhouse Gas | General Description |
|---|---|
| Carbon Dioxide ($CO_2$) | An odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of $CO_2$ are burning coal, oil, natural gas, and wood. |
| Methane ($CH_4$) | A flammable gas and the main component of natural gas. When one molecule of $CH_4$ is burned in the presence of oxygen, one molecule of $CO_2$ and two molecules of water are released. A natural source of $CH_4$ is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain $CH_4$, which is extracted for fuel. Other sources are landfills, fermentation of manure, and cattle. |
| Nitrous Oxide ($N_2O$) | A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. $N_2O$ is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant. |
| Hydrofluorocarbons (HFCs) | Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in $CH_4$ or ethane ($C_2H_6$) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs. |
| Perfluorocarbons (PFCs) | PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing. |
| Sulfur Hexafluoride ($SF_6$) | An inorganic, odorless, colorless, non-toxic, and non-flammable gas. $SF_6$ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection. |
| Nitrogen Trifluoride ($NF_3$) | An inorganic, non-toxic, odorless, non-flammable gas. $NF_3$ is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers. |

[a] *GHGs identified in this table are ones identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.*

*Source: Association of Environmental Professionals, Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007; United States Environmental Protection Agency, Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride; January 2009.*

**Table IV.E-2**
**Atmospheric Lifetimes and Global Warming Potentials**

| Gas | Atmospheric Lifetime (years) | Global Warming Potential (100-year time horizon) | |
|---|---|---|---|
| | | Fourth Assessment Report (AR4) | Fifth Assessment Report (AR5) |
| Carbon Dioxide ($CO_2$) | 50–200 | 1 | 1 |
| Methane ($CH_4$) | 12 (+/-3) | 25 | 28 |
| Nitrous Oxide ($N_2O$) | 114 | 298 | 265 |
| HFC-23: Fluoroform ($CHF_3$) | 270 | 14,800 | 12,400 |
| HFC-134a: 1,1,1,2-Tetrafluoroethane ($CH_2FCF_3$) | 14 | 1,430 | 1,300 |
| HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$) | 1.4 | 124 | 138 |
| PFC-14: Tetrafluoromethane ($CF_4$) | 50,000 | 7,390 | 6,630 |
| PFC-116: Hexafluoroethane ($C_2F_6$) | 10,000 | 12,200 | 11,100 |
| Sulfur Hexafluoride ($SF_6$) | 3,200 | 22,800 | 23,500 |
| Nitrogen Trifluoride ($NF_3$) | 740 | 17,200 | 16,100 |

*Source: IPCC, Climate Change 2007: Working Group I: The Physical Science Basis, Direct Global Warming Potentials.*

## b. Projected Impacts of Global Warming in California

In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and is responsible for preparing reports to the Governor on the status of the CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California.[12] These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion;
- The Sierra snowpack would decline between 70 and 90 percent by the end of the century, threatening California's water supply;

[12] *State of California, Department of Justice, Office of the Attorney General, Climate Change Impacts in California, https://oag.ca.gov/environment/impact, accessed July 6, 2023.*

- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth.

- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes resulting in public health impacts;

- Habitat destruction and loss of ecosystems due to climate change affecting plant and wildlife habitats; and

- Global warming can cause drought, warmer temperatures and saltwater contamination resulting in impacts to California's agricultural industry.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric $CO_2$; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness.[13]

## c. Regulatory Framework

There are a number of plans, regulations, programs, and agencies that provide policies, requirements, and guidelines regarding GHG emissions at the federal, state, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Federal Clean Air Act

- Corporate Average Fuel Economy (CAFE) Standards

- Energy Independence and Security Act

- California Air Resources Board

- California Greenhouse Gas Reduction Targets

[13] *Paul R. Epstein, et al., Urban Indicators of Climate Change, Report from the Center for Health and the Global Environment, (Harvard Medical School and the Boston Public Health Commission, August 2003), unpaginated.*

- California Global Warming Solutions Act (AB 32)
- Climate Change Scoping Plan
- Cap-and-Trade Program
- Emission Performance Standards
- Renewables Portfolio Standard Program
- Clean Energy and Pollution Reduction Act
- Pavley Standards
- California Low Carbon Fuel Standard
- Advanced Clean Cars Regulations
- Sustainable Communities and Climate Protection Act (SB 375)
- Senate Bill 743
- Executive Order N-79-20
- California Appliance Efficiency Regulations
- Title 24, Building Standards Code and CALGreen Code
- CEQA Guidelines
- South Coast Air Quality Management District
- Southern California Association of Governments Regional Transportation Plan/ Sustainable Communities Strategy
- Green New Deal Initiative
- City of Los Angeles Green Building Code
- City of Los Angeles Solid Waste Programs and Ordinances
- City of Los Angeles General Plan
- Traffic Study Policies and Procedures

## (1) Federal

### *(a) Federal Clean Air Act*

The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address GHGs. The United States Supreme Court ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that $CO_2$ and other GHGs are pollutants under the federal Clean Air Act (CAA), which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. In December 2009, U.S. EPA issued an endangerment finding for GHGs under the Clean Air Act, setting the stage for future regulation.

The Federal Government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, $CH_4$ and other non-$CO_2$ gases, agricultural practices, and implementation of technologies to achieve GHG reductions. USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the ENERGY STAR labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

### *(b) Corporate Average Fuel Economy (CAFE) Standards*

In response to the *Massachusetts v. Environmental Protection Agency* ruling, President George W. Bush issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. The National Highway Traffic Safety Administration (NHTSA) subsequently issued multiple final rules regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011 and later for model years 2012–2016, and 2017–2021. In March 2020, the USDOT and the USEPA issued the final Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which amends existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establishes new standards covering model years 2021 through 2026.[14] These standards set a combined fleet wide average of 36.9 to 37 for the model years affected.[15]

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[14] *United States Environmental Protection Agency, Final Rule for Model Year 2021–2026 Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards, published April 30, 2020.*

[15] *National Highway Traffic Safety Administration (NHTSA), Corporate Average Fuel Economy standards.*

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for $CO_2$ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines. Building on the first phase of standards, in August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium- and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower $CO_2$ emissions by approximately 1.1 billion metric tons.[16]

*(c) Energy Independence and Security Act*

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;

- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;

- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

[16] *US EPA, "EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond," August 2016.*

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[17]

## (2) State

### *(a) California Air Resources Board*

The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the Federal Government and the local air districts. The SIP is required for the State to take over implementation of the Federal CAA. CARB also has primary responsibility for adopting regulations to meet the State's goal of reducing GHG emissions. The State has met its goals to reduce GHG emissions to 1990 levels by 2020. Subsequent State goals include reducing GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

### *(b) California Greenhouse Gas Reduction Targets*

#### *(i) Executive Order S-3-05*

Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

[17] *A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.*

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. The CAT provides periodic reports to the Governor and Legislature on the State of GHG reductions in the State, as well as strategies for mitigating and adapting to climate change.

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population.

*(ii) Executive Order B-30-15*

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of $CO_2e$ ($MMTCO_2e$).

*(iii) Executive Order B-55-18*

Executive Order B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, CARB would work with relevant state agencies to develop a framework for implementation and accounting that tracks progress towards this goal, as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

In October 2020, CARB released a study, which evaluated three scenarios that achieve carbon neutrality in California by 2045. The study will be used by CARB in

development of the 2022 Scoping Plan update.[18] More ambitious carbon reduction scenarios that achieve carbon neutrality prior to 2045 may be considered as part of future analyses by the State.

The scenarios analyzed to achieve carbon neutrality include a High Carbon Dioxide Removal (CDR) scenario, Zero Carbon Energy scenario, and a Balanced scenario. The High CDR scenario achieves GHG reductions by relying on $CO_2$ removal strategies. The Zero Carbon Energy scenario is based on the assumption of zero-fossil fuel emissions by 2045. The Balanced scenario represents a middle point between the High CDR scenario and Zero Carbon Energy scenario. The scenarios would achieve at least an 80-percent reduction in GHGs by 2045, relative to 1990 levels. Remaining $CO_2$ would be reduced to zero by applying $CO_2$ removal strategies, including sinks from natural and working lands and negative emissions technologies, such as direct air capture.[19,20]

Under each of these scenarios, CARB proposed reduction strategies for various sectors that contribute GHG emissions throughout the State. Although specific details are not yet available for the GHG reduction measures discussed above, implementation of these measures would require regulations to be enforced by the State.

*(c) California Global Warming Solutions Act of 2006*

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code (HSC), Division 25.5—California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines regulated GHGs as CO2, CH4, N2O, HFCs, PFCs, and SF6 and represents the first enforceable Statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing State actions that would achieve GHG emissions reductions.

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce

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[18] *Energy+Environmental Economics (E3), Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board, October 2020.*

[19] *Sinks are defined as natural or artificial reservoirs that accumulate and store a carbon-containing chemical compound for an indefinite period.*

[20] *Energy+Environmental Economics (E3), Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board, October 2020, p. 22.*

statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.[21]

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5, establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure that the benefits of state climate policies reach disadvantaged communities. The new goals outlined in SB 32 update the scoping plan requirement of AB 32 and involve increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

AB 197, signed September 8, 2016, is a bill linked to SB 32 and signed on September 8, 2016, prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its website the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two members of the Legislature to the CARB board as ex officio, non-voting members and creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the State's programs, policies, and investments related to climate change.

*(d) Climate Change Scoping Plan*

The Scoping Plan is a greenhouse gas emission reduction roadmap developed and updated by the California Air Resources Board (CARB) at least once every five years, as required by Assembly Bill (AB) 32. It lays out the transformations needed across various sectors to reduce GHG emissions and reach the State's climate targets. CARB published the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) in November 2022, as the third update to the initial plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 target of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business

[21] *CARB's list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.*

as usual activities.[22] The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan Update (adopted in 2014) assessed progress toward achieving the 2020 target and made the case for addressing short-lived climate pollutants (SLCPs).[23] The 2017 Scoping Plan Update,[24] shifted focus to the newer Senate Bill (SB) 32 goal of a 40-percent reduction below 1990 levels by 2030 by laying out a detailed cost-effective and technologically feasible path to this target, and also assessed progress towards achieving the AB 32 goal of returning to 1990 GHG levels by 2020. The 2020 goal was ultimately reached in 2016, four years ahead of the schedule called for under AB 32.

The 2022 Scoping Plan Update is the most comprehensive and far-reaching Scoping Plan developed to date. It identifies a technologically feasible, cost-effective, and equity-focused path to achieve new targets for carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85 percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan.[25] The 2030 target is an interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The relatively longer path assessed in the 2022 Scoping Plan Update incorporates, coordinates, and leverages many existing and ongoing efforts to reduce GHGs and air pollution, while identifying new clean technologies and energy. Given the focus on carbon neutrality, the 2022 Scoping Plan Update also includes discussion for the first time of the natural and working lands sectors as sources for both sequestration and carbon storage, and as sources of emissions as a result of wildfires. A summary of the GHG emissions reductions and targets set forth under the 2022 Scoping Plan Update is provided in Table IV.E-3 on page IV.E-16.

The 2022 Scoping Plan Update reflects existing and recent direction in the Governor's Executive Orders and State Statutes, which identify policies, strategies, and regulations in support of and implementation of the Scoping Plan. Among these include Executive Order B-55-18 and AB 1279 (The California Climate Crisis Act), which identify the 2045 carbon neutrality and GHG reduction targets required for the Scoping Plan. Table IV.E-4 on page IV.E-17 provides a summary of major climate legislation and executive orders issued since the adoption of the 2017 Scoping Plan.

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22 *CARB, Climate Change Scoping Plan, 2008.*

23 *CARB, First Update to the Climate Change Scoping Plan, 2014.*

24 *CARB, California's 2017 Climate Change Scoping Plan, 2017.*

25 *CARB, California's 2017 Climate Change Scoping Plan, 2017.*

**Table IV.E-3**
**Estimated Statewide Greenhouse Gas Emissions Reductions in the 2022 Scoping Plan**

| Emissions Scenario | GHG Emissions ($MMTCO_2e$) |
|---|---|
| **2019** | |
| 2019 State GHG Emissions | 404 |
| **2030** | |
| 2030 BAU Forecast | 312 |
| 2030 GHG Emissions without Carbon Removal and Capture | 233 |
| 2030 GHG Emissions with Carbon Removal and Capture | 226 |
| 2030 Emissions Target Set by AB 32 (i.e., 1990 level by 2030) | 260 |
| Reduction below Business-As-Usual necessary to achieve 1990 levels by 2030 | 52 (16.7%)[a] |
| **2045** | |
| 2045 BAU Forecast | 266 |
| 2045 GHG Emissions without Carbon Removal and Capture | 72 |
| 2045 GHG Emissions with Carbon Removal and Capture | (3) |

*$MMTCO_2e$ = million metric tons of carbon dioxide equivalents; parenthetical numbers represent negative values.*

[a] *312 – 260 = 52 /312 = 16.7%*

*Source: CARB, Final 2022 Climate Change Scoping Plan, November 2022.*

The 2022 Scoping Plan Scenario identifies the need to enhance AB 32's 2030 GHG reduction target, from 40 percent to 48 percent below 1990 levels. Cap-and-Trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet these GHG reduction goals and achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology. The Scoping Plan Scenario is summarized in Table 2-1 starting on page 72 of the Scoping Plan. It includes references to relevant statutes and Executive Orders, although it is not comprehensive of all existing new authorities for directing or supporting the actions described. Table 2-1 identifies actions related to a variety of sectors such as: smart growth and reductions in Vehicle Miles Traveled (VMT); light-duty vehicles (LDV) and zero-emission vehicles (ZEV); truck ZEVs; reduce fossil energy, emissions, and GHGs for aviation ocean-going vessels, port operations, freight and passenger rail, oil and gas extraction; and petroleum refining; improvements in electricity generation; electrical appliances in new and existing residential and commercial buildings; electrification and emission reductions across industries such as the for food products, construction equipment, chemicals and allied products, pulp and paper, stone/clay/glass/cement, other

**Table IV.E-4**
**Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan**

| Bill/Executive Order | Summary |
|---|---|
| **Assembly Bill 1279 (AB 1279) (Muratsuchi, Chapter 337, Statutes of 2022)**<br>*The California Climate Crisis Act* | AB 1279 establishes the policy of the state to achieve carbon neutrality as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045 statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. The bill requires CARB to ensure that Scoping Plan updates identify and recommend measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable $CO_2$ removal solutions and carbon capture, utilization, and storage (CCUS) technologies.<br><br>This bill is reflected directly in 2022 Scoping Plan Update. |
| **Senate Bill 905 (SB 905) (Caballero, Chapter 359, Statutes of 2022)**<br>*Carbon Capture, Removal, Utilization, and Storage Program* | SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate CCUS and carbon dioxide removal (CDR) projects and technology.<br><br>The bill requires CARB, on or before January 1, 2025, to adopt regulations creating a unified state permitting application for approval of CCUS and CDR projects. The bill also requires the Secretary of the Natural Resources Agency to publish a framework for governing agreements for two or more tracts of land overlying the same geologic storage reservoir for the purposes of a carbon sequestration project.<br><br>The 2022 Scoping Plan Update modeling reflects both CCUS and CDR contributions to achieve carbon neutrality. |
| **Senate Bill 846 (SB 846) (Dodd, Chapter 239, Statutes of 2022)**<br>*Diablo Canyon Powerplant: Extension of Operations* | SB 846 extends the Diablo Canyon Power Plant's sunset date by up to five additional years for each of its two units and seeks to make the nuclear power plant eligible for federal loans. The bill requires that the California Public Utilities Commission (CPUC) not include and disallow a load-serving entity from including in their adopted resource plan, the energy, capacity, or any attribute from the Diablo Canyon power plant.<br><br>The 2022 Scoping Plan Update explains the emissions impact of this legislation. |
| **Senate Bill 1020 (SB 1020) (Laird, Chapter 361, Statutes of 2022)**<br>*Clean Energy, Jobs, and Affordability Act of 2022* | SB 1020 adds interim renewable energy and zero carbon energy retail sales of electricity targets to California end-use customers set at 90 percent in 2035 and 95 percent in 2040. It accelerates the timeline required to have 100 percent renewable energy and zero carbon energy procured to serve state agencies from the original target year of 2045 to 2035. This bill requires each state agency to individually achieve the 100 percent goal by 2035 with specified requirements. This bill requires the CPUC, California Energy Commission (CEC), and CARB, on or before December 1, 2023, and annually thereafter, to issue a joint reliability progress report that reviews system and local reliability.<br><br>The bill also modifies the requirement for CARB to hold a portion of its Scoping Plan workshops in regions of the state with the most significant exposure to air pollutants by further specifying that this includes communities with minority populations or low-income communities in areas designated as being in extreme federal non-attainment.<br><br>The 2022 Scoping Plan Update describes the implications of this legislation on emissions. |

**Table IV.E-4 (Continued)**
**Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan**

| Bill/Executive Order | Summary |
|---|---|
| **Senate Bill 1137 (SB 1137) (Gonzales, Chapter 365, Statutes of 2022)**<br>*Oil & Gas Operations: Location Restrictions: Notice of Intention: Health protection zone: Sensitive receptors* | SB 1137 prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with the California Geologic Energy Management Division (CalGEM) on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data. |
| **Senate Bill 1075 (SB 1075) (Skinner, Chapter 363, Statutes of 2022)**<br>*Hydrogen: Green Hydrogen: Emissions of Greenhouse Gases* | SB 1075 requires CARB, by June 1, 2024, to prepare an evaluation that includes: policy recommendations regarding the use of hydrogen, and specifically the use of green hydrogen, in California; a description of strategies supporting hydrogen infrastructure, including identifying policies that promote the reduction of GHGs and short-lived climate pollutants; a description of other forms of hydrogen to achieve emission reductions; an analysis of curtailed electricity; an estimate of GHG and emission reductions that could be achieved through deployment of green hydrogen through a variety of scenarios; an analysis of the potential for opportunities to integrate hydrogen production and applications with drinking water supply treatment needs; policy recommendations for regulatory and permitting processes associated with transmitting and distributing hydrogen from production sites to end uses; an analysis of the life-cycle GHG emissions from various forms of hydrogen production; and an analysis of air pollution and other environmental impacts from hydrogen distribution and end uses.<br><br>This bill would inform the production of hydrogen at the scale called for in the 2022 Scoping Plan Update. |
| **Assembly Bill 1757 (AB 1757) (Garcia, Chapter 341, Statutes of 2022)**<br>*California Global Warming Solutions Act of 2006: Climate Goal: Natural and Working Lands* | AB 1757 requires the California Natural Resources Agency (CNRA), in collaboration with CARB, other state agencies, and an expert advisory committee, to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions, that reduce GHG emissions in 2030, 2038, and 2045 by January 1, 2024. These targets must support state goals to achieve carbon neutrality and foster climate adaptation and resilience.<br><br>This bill also requires CARB to develop standard methods for state agencies to consistently track GHG emissions and reductions, carbon sequestration, and additional benefits from natural and working lands over time. These methods will account for GHG emissions reductions of $CO_2$, methane, and nitrous oxide related to natural and working lands and the potential impacts of climate change on the ability to reduce GHG emissions and sequester carbon from natural and working lands, where feasible.<br><br>This 2022 Scoping Plan Update describes the next steps and implications of this legislation for the natural and working lands sector. |
| **Senate Bill 1206 (SB 1206) (Skinner, Chapter 884, Statutes of 2022)**<br>*Hydrofluorocarbon gases: sale or distribution* | SB 1206 mandates a stepped sales prohibition on newly produced high-global warming potential (GWP) HFCs to transition California's economy toward recycled and reclaimed HFCs for servicing existing HFC-based equipment. Additionally, SB 1206 also requires CARB to develop regulations to increase the adoption of very low-, i.e., GWP < 10, and |

**Table IV.E-4 (Continued)**
**Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan**

| Bill/Executive Order | Summary |
|---|---|
| | no-GWP technologies in sectors that currently rely on higher-GWP HFCs. |
| **Senate Bill 27 (SB 27) (Skinner, Chapter 237, Statutes of 2021)** *Carbon Sequestration: State Goals: Natural and Working Lands: Registry of Projects* | SB 27 requires CNRA, in coordination with other state agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. This bill also requires CARB to establish specified $CO_2$ removal targets for 2030 and beyond as part of its Scoping Plan. Under SB 27, CNRA is to establish and maintain a registry to identify projects in the state that drive climate action on natural and working lands and are seeking funding.<br><br>CNRA also must track carbon removal and GHG emission reduction benefits derived from projects funded through the registry.<br><br>This bill is reflected directly in 2022 Scoping Plan Update as $CO_2$ removal targets for 2030 and 2045 in support of carbon neutrality. |
| **Senate Bill 596 (SB 596) (Becker, Chapter 246, Statutes of 2021)** *Greenhouse Gases: Cement Sector: Net- zero Emissions Strategy* | SB 596 requires CARB, by July 1, 2023, to develop a comprehensive strategy for the state's cement sector to achieve net-zero-emissions of GHGs associated with cement used within the state as soon as possible, but no later than December 31, 2045. The bill establishes an interim target of 40 percent below the 2019 average GHG intensity of cement by December 31, 2035. Under SB 596, CARB must:<br><br>• Define a metric for GHG intensity and establish a baseline from which to measure GHG intensity reductions.<br>• Evaluate the feasibility of the 2035 interim target (40-percent reduction in GHG intensity) by July 1, 2028.<br>• Coordinate and consult with other state agencies.<br>• Prioritize actions that leverage state and federal incentives.<br>• Evaluate measures to support market demand and financial incentives to encourage the production and use of cement with low GHG intensity.<br><br>The 2022 Scoping Plan Update modeling is designed to achieve these outcomes. |
| **Executive Order N-82-20** | Governor Newsom signed Executive Order N-82-20 in October 2020 to combat the climate and biodiversity crises by setting a statewide goal to conserve at least 30 percent of California's land and coastal waters by 2030. The Executive Order also instructed the CNRA, in consultation with other state agencies, to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the state's carbon neutrality goal and build climate resilience. In addition to setting a statewide conservation goal, the Executive Order directed CARB to update the target for natural and working lands in support of carbon neutrality as part of this Scoping Plan, and to take into consideration the NWL Climate Smart Strategy. Executive Order N-82-20 also calls on the CNRA, in consultation with other state agencies, to establish the California Biodiversity Collaborative (Collaborative). The Collaborative shall be made up of governmental partners, California Native American tribes, experts, business and community leaders, and other stakeholders from across the state. State agencies will consult the Collaborative on efforts to:<br><br>• Establish a baseline assessment of California's biodiversity that builds upon existing data and can be updated over time. |

**Table IV.E-4 (Continued)**
**Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan**

| Bill/Executive Order | Summary |
|---|---|
| | • Analyze and project the impact of climate change and other stressors in California's biodiversity.<br>• Inventory current biodiversity efforts across all sectors and highlight opportunities for additional action to preserve and enhance biodiversity.<br><br>CNRA also is tasked with advancing efforts to conserve biodiversity through various actions, such as streamlining the state's process to approve and facilitate projects related to environmental restoration and land management. The California Department of Food and Agriculture (CDFA) is directed to advance efforts to conserve biodiversity through measures such as reinvigorating populations of pollinator insects, which restore biodiversity and improve agricultural production.<br><br>The Natural and Working Lands Climate Smart Strategy informs 2022 Scoping Plan Update. |
| **Executive Order N-79-20** | Governor Newsom signed Executive Order N-79-20 in September 2020 to establish targets for the transportation sector to support the state in its goal to achieve carbon neutrality by 2045. The targets established in this Executive Order are:<br><br>• 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035.<br>• 100 percent of medium- and heavy-duty vehicles will be zero-emission by 2045 for all operations where feasible, and by 2035 for drayage trucks.<br>• 100 percent of off-road vehicles and equipment will be zero-emission by 2035 where feasible.<br><br>The Executive Order also tasked CARB to develop and propose regulations that require increasing volumes of zero- electric passenger vehicles, medium- and heavy-duty vehicles, drayage trucks, and off-road vehicles toward their corresponding targets of 100 percent zero-emission by 2035 or 2045, as listed above.<br><br>The 2022 Scoping Plan Update modeling reflects achieving these targets. |
| **Executive Order N-19-19** | Governor Newsom signed Executive Order N-19-19 in September 2019 to direct state government to redouble its efforts to reduce GHG emissions and mitigate the impacts of climate change while building a sustainable, inclusive economy. This Executive Order instructs the Department of Finance to create a Climate Investment Framework that:<br><br>• Includes a proactive strategy for the state's pension funds that reflects the increased risks to the economy and physical environment due to climate change.<br>• Provides a timeline and criteria to shift investments to companies and industry sectors with greater growth potential based on their focus of reducing carbon emissions and adapting to the impacts of climate change.<br>• Aligns with the fiduciary responsibilities of the California Public Employees' Retirement System, California State Teachers' Retirement System, and the University of California Retirement Program.<br><br>Executive Order N-19-19 directs the State Transportation Agency to |

**Table IV.E-4 (Continued)**
**Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan**

| Bill/Executive Order | Summary |
|---|---|
| | leverage more than $5 billion in annual state transportation spending to help reverse the trend of increased fuel consumption and reduce GHG emissions associated with the transportation sector. It also calls on the Department of General Services to leverage its management and ownership of the state's 19 million square feet in managed buildings, 51,000 vehicles, and other physical assets and goods to minimize state government's carbon footprint. Finally, it tasks CARB with accelerating progress toward California's goal of five million ZEV sales by 2030 by:<br>• Developing new criteria for clean vehicle incentive programs to encourage manufacturers to produce clean, affordable cars.<br>• Proposing new strategies to increase demand in the primary and secondary markets for ZEVs.<br>• Considering strengthening existing regulations or adopting new ones to achieve the necessary GHG reductions from within the transportation sector.<br>The 2022 Scoping Plan Update modeling reflects efforts to accelerate ZEV deployment. |
| **Senate Bill 576 (SB 576) (Umberg, Chapter 374, Statutes of 2019)**<br>*Coastal Resources: Climate Ready Program and Coastal Climate Change Adaptation, Infrastructure and Readiness Program* | Sea level rise, combined with storm-driven waves, poses a direct risk to the state's coastal resources, including public and private real property and infrastructure. Rising marine waters threaten sensitive coastal areas, habitats, the survival of threatened and endangered species, beaches, other recreation areas, and urban waterfronts. SB 576 mandates that the Ocean Protection Council develop and implement a coastal climate adaptation, infrastructure, and readiness program to improve the climate change resiliency of California's coastal communities, infrastructure, and habitat. This bill also instructs the State Coastal Conservancy to administer the Climate Ready Program, which addresses the impacts and potential impacts of climate change on resources within the conservancy's jurisdiction. |
| **Assembly Bill 65 (AB 65) (Petrie- Norris, Chapter 347, Statutes of 2019)**<br>*Coastal Protection: Climate Adaption: Project Prioritization: Natural Infrastructure: Local General Plans* | This bill requires the State Coastal Conservancy, when it allocates any funding appropriated pursuant to the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018, to prioritize projects that use natural infrastructure in coastal communities to help adapt to climate change. The bill requires the conservancy to provide information to the Office of Planning and Research on any projects funded pursuant to the above provision to be considered for inclusion into the clearinghouse for climate adaption information. The bill authorizes the conservancy to provide technical assistance to coastal communities to better assist them with their projects that use natural infrastructure. |
| **Executive Order B-55-18** | Governor Brown signed Executive Order B-55-18 in September 2018 to establish a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. Policies and programs undertaken to achieve this goal shall:<br>• Seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities.<br>• Be implemented in a manner that supports climate adaptation and biodiversity, including protection of the state's water supply, water |

**Table IV.E-4 (Continued)**
**Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan**

| Bill/Executive Order | Summary |
|---|---|
| | quality, and native plants and animals.<br>This Executive Order also calls for CARB to:<br>• Develop a framework for implementation and accounting that tracks progress toward this goal.<br>• Ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal.<br>The 2022 Scoping Plan Update is designed to achieve carbon neutrality no later than 2045 and the modeling includes technology and fuel transitions to achieve that outcome. |
| **Senate Bill 100 (SB 100) (De León, Chapter 312, Statutes of 2018)**<br>*California Renewables Portfolio Standard Program: emissions of greenhouse gases* | Under SB 100, the CPUC, CEC, and CARB shall use programs under existing laws to achieve 100 percent clean electricity. The statute requires these agencies to issue a joint policy report on SB 100 every four years. The first of these reports was issued in 2021.<br>The 2022 Scoping Plan Update reflects the SB 100 Core Scenario resource mix with a few minor updates. |
| **Assembly Bill 2127 (AB 2127) (Ting, Chapter 365, Statutes of 2018)**<br>*Electric Vehicle Charging Infrastructure: Assessment* | This bill requires the CEC, working with CARB and the CPUC, to prepare and biennially update a statewide assessment of the electric vehicle charging infrastructure needed to support the levels of electric vehicle adoption required for the state to meet its goals of putting at least 5 million zero-emission vehicles on California roads by 2030 and of reducing emissions of GHGs to 40 percent below 1990 levels by 2030. The bill requires the CEC to regularly seek data and input from stakeholders relating to electric vehicle charging infrastructure.<br>This bill supports the deployment of ZEVs as modeled in 2022 Scoping Plan Update. |
| **Senate Bill 30 (SB 30) (Lara, Chapter 614, Statutes of 2018)**<br>*Insurance: Climate Change* | This bill requires the Insurance Commissioner to convene a working group to identify, assess, and recommend risk transfer market mechanisms that, among other things, promote investment in natural infrastructure to reduce the risks of climate change related to catastrophic events, create incentives for investment in natural infrastructure to reduce risks to communities, and provide mitigation incentives for private investment in natural lands to lessen exposure and reduce climate risks to public safety, property, utilities, and infrastructure. The bill requires the policies recommended to address specified questions. |
| **Assembly Bill 2061 (AB 2061) (Frazier, Chapter 580, Statutes of 2018)**<br>*Near-zero-emission and Zero-emission Vehicles* | Existing state and federal law sets specified limits on the total gross weight imposed on the highway by a vehicle with any group of two or more consecutive axles. Under existing federal law, the maximum gross vehicle weight of that vehicle may not exceed 82,000 pounds. AB 2061 authorizes a near-zero- emission vehicle or a zero-emission vehicle to exceed the weight limits on the power unit by up to 2,000 pounds.<br>This bill supports the deployment of cleaner trucks as modeled in this 2022 Scoping Plan Update. |

industrial manufacturing, and agriculture; retiring of combined heat and power facilities; low carbon fuels for transportation, business, and industry; improvements in non-combustion methane emissions, and introduction of low GWP refrigerants.

Achieving the targets described in the 2022 Scoping Plan Update will require continued commitment to and successful implementation of existing policies and programs, and identification of new policy tools and technical solutions to go further, faster. California's Legislature and state agencies will continue to collaborate to achieve the state's climate, clean air, equity, and broader economic and environmental protection goals. It will be necessary to maintain and strengthen this collaborative effort, and to draw upon the assistance of the federal government, regional and local governments, tribes, communities, academic institutions, and the private sector to achieve the state's near-term and longer-term emission reduction goals and a more equitable future for all Californians. The Scoping Plan acknowledges that the path forward is not dependent on one agency, one state, or even one country. However, the State can lead by engaging Californians and demonstrating how actions at the state, regional, and local levels of governments, as well as action at community and individual levels, can contribute to addressing the challenge.

Aligning local jurisdiction action with state-level priorities to tackle climate change and the outcomes called for in the 2022 Scoping Plan Update is identified as critical to achieving the statutory targets for 2030 and 2045. The 2022 Scoping Plan Update discusses the role of local governments in meeting the State's GHG reductions goals. Local governments have the primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth, economic growth, and the changing needs of their jurisdictions. They also make critical decisions on how and when to deploy transportation infrastructure, and can choose to support transit, walking, bicycling, and neighborhoods that do not force people into cars. Local governments also have the option to adopt building ordinances that exceed statewide building code requirements, and play a critical role in facilitating the rollout of ZEV infrastructure. As a result, local government decisions play a critical role in supporting state-level measures to contain the growth of GHG emissions associated with the transportation system and the built environment—the two largest GHG emissions sectors over which local governments have authority. The City has taken the initiative in combating climate change by developing programs and regulations such as the City's Green New Deal and Green Building Code. Each of these is discussed further below.

*(e) Cap-and-Trade Program*

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as one of the strategies California would employ to reduce GHG emissions. CARB asserts that this program will help put California on the path to meet its goal of ultimately achieving an 80-percent reduction from 1990 levels by 2050. Under Cap-and-Trade, an overall limit on

GHG emissions from capped sectors is established, and facilities subject to the cap are able to trade permits to emit GHGs within the overall limit.

CARB designed and adopted a California Cap-and-Trade Program[26] pursuant to its authority under AB 32. The Cap-and-Trade Program is designed to reduce GHG emissions from public and private major sources (deemed "covered entities") by setting a firm cap on Statewide GHG emissions and employing market mechanisms to achieve the State's emission-reduction mandates. The Statewide cap for GHG emissions from the capped sectors[27] (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the Program's duration.

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities that emit more than 25,000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program.[28] Triggering of the 25,000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or MRR).[29]

Each covered entity with a compliance obligation is required to surrender "compliance instruments"[30] for each metric ton $CO_2e$ of GHG they emit. Covered entities are allocated free allowances in whole or in part (if eligible) and may buy allowances at auction, purchase allowances from others, or purchase offset credits.

The Cap-and-Trade Program provides a firm cap, ensuring that the Statewide emission limits will not be exceeded. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state's emissions forecasts and the effectiveness of direct regulatory measures.

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[26] *California Code of Regulations 17, Sections 95800–96023.*

[27] *California Code of Regulations 17, Sections 95811, 95812.*

[28] *California Code of Regulations 17, Section 95812.*

[29] *California Code of Regulations 17, Sections 95100–95158.*

[30] *Compliance instruments are permits to emit, the majority of which will be "allowances," but entities also are allowed to use CARB-approved offset credits to meet up to 8 percent of their compliance obligations.*

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported.[31] Accordingly, for projects that are subject to the CEQA, GHG emissions from electricity consumption are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Cap-and-Trade Program's first compliance period.[32]

The Program applies to emissions that cover approximately 80 percent of the State's GHG emissions. Demonstrating the efficacy of AB 32 policies, California achieved its 2020 GHG Reduction Target four years earlier than mandated. The largest reductions were the result of increased renewable electricity in the electricity sector, which is a covered sector in the Cap-and-Trade Program.

AB 398 was enacted in 2017 to extend and clarify the role of the State's Cap-and-Trade Program through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade Program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

*(f) Energy-Related (Stationary) Sources*

*(i) Emission Performance Standards*

SB 1368, signed September 29, 2006, is a companion bill to AB 32, which requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the State. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32.

*(ii) Renewables Portfolio Standard*

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017 as a Renewables Portfolio Standard (RPS). Subsequent amendments provided additional targets throughout the years. Most recently, on October 7, 2015, SB 350 (Chapter 547, Statues of 2015), also known as the Clean Energy and Pollution Reduction Act, further increased the RPS to

[31] *California Code of Regulations 17, Section 95811(b).*

[32] *California Code of Regulations 17, Sections 95811, 95812(d).*

50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 also requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. The 2017 Climate Change Scoping Plan incorporated the SB 350 standards and estimated the GHG reductions would account for approximately 21 percent of the Scoping Plan reductions.[33] On September 10, 2018, SB 100, provided additional RPS targets of 44 percent by 2024, 52 percent by 2027, and 60 percent by 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by 2045.[34]

*(g) Mobile Sources*

*(i) Pavley Standards*

AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In 2004, CARB approved the Pavley regulation to require automakers to control greenhouse gas emissions from new passenger vehicles for the 2009 through 2016 model years. Upon adoption of subsequent federal greenhouse gas standards by the United States Environmental Protection Agency (USEPA) that preserved the benefits of the Pavley regulations, the Pavley regulations were revised to accept compliance with the federal standards as compliance with California's standards in the 2012 through 2016 model years. This is referred to as the "deemed to comply" option.

In January 2012, CARB approved greenhouse gas emission regulations which require further reductions in passenger greenhouse gas emissions for 2017 and subsequent vehicle model years. As noted above, in August 2012, the USEPA and USDOT adopted GHG emission standards for model year 2017 through 2025 vehicles.[35] On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017–2025 national standards to meet State law. Automobile manufacturers generally comply with these standards through a combination of improved energy efficiency in vehicle equipment (e.g., air conditioning systems) and engines as well as sleeker aerodynamics, use of strong but lightweight materials, and lower-rolling resistance tires.[36]

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[33] *CARB, California's 2017 Climate Change Scoping Plan, Table 3, p. 31, November 2017. Calculated as: (108 – 53) / 260 = 21 percent.*

[34] *California Legislative Information, SB-100 California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases.*

[35] *United States Environmental Protection Agency, 2012.*

[36] *CARB, California's Advanced Clean Cars Midterm Review, pp. ES-17, C-9.*

In 2018, the USEPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE) which would roll back fuel economy standards and revoke California's waiver. The rule amended certain average fuel economy and GHG standards for passenger cars covering model years 2021 through 2026. On March 30, 2020, the SAFE Rule was finalized and published in the Federal Register, commencing a review period. Subsequent legal challenges from a coalition of states, including California, and private industry groups were issued. However, in December 2021, the NHTSA repealed the SAFE Vehicle Rule Part One.[37] Although the SAFE Vehicle Rule Part One has been repealed, GHG modeling contained in regional plans, such as SCAG's 2020–2045 RTP/SCS, have not been updated to account for this repeal.

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the State's GHG and ZEV programs under Section 209 of the Clean Air Act.[38] The withdrawal of the waiver was effective November 26, 2019. In response, several states including California filed a lawsuit challenging the withdrawal of the EPA waiver.[39] In April 2021, the USEPA announced it will move to reconsider its previous withdrawal and grant California permission to set more stringent climate requirements for cars and SUVs.[40]

*(ii) California Low Carbon Fuel Standard*

Executive Order S-01-07 was enacted on January 18, 2007. The order mandates the following: (1) that a Statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020; and (2) that a LCFS for transportation fuels be established in California. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted.[41]

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[37] *Federal Register. Vol. 86, No. 247, December 29, 2021.*

[38] *84 FR 51310.*

[39] *United States District Court for the District Court of Columbia, State of California vs. Chao, Case 1:19-cv-02826, 2019.*

[40] *United States Federal Register, California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a Previous Withdrawal of a Waiver of Preemption; Opportunity for Public Hearing and Public Comment (Document Number: 2021-08826), April 28, 2021.*

[41] *CARB, Low Carbon Fuel Standard, About, ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/about, accessed July 6, 2023.*

The development of the 2017 Scoping Plan Update has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In September 2018, the standards were amended by CARB to require a 20-percent reduction in carbon intensity by 2030, aligning with California's 2030 targets set by SB 32.[42]

*(iii) Advanced Clean Cars Regulations*

In 2012, CARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015–2025.[43] The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the ZEV regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.[44] During the March 2017 Midterm Review, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV program for cars and light trucks sold in California through 2025.[45]

In addition, Governor Gavin Newsom signed an executive order (Executive Order No. N-79-20) on September 23, 2020, that would phase out sales of new gasoline-powered passenger cars by 2035 in California with an additional 10-year transition period for heavy vehicles. The state would not restrict used car sales, nor forbid residents from owning gasoline-powered vehicles. In accordance with the Executive Order, CARB is developing a 2020 Mobile Source Strategy, a comprehensive analysis that presents scenarios for possible strategies to reduce the carbon, toxic and unhealthy pollution from cars, trucks, equipment, and ships. The strategies will provide important information for numerous regulations and incentive programs going forward by conveying what is necessary to address the aggressive emission reduction requirements.

The primary mechanism for achieving the ZEV target for passenger cars and light trucks is CARB's Advanced Clean Cars II (ACC II) Program. The ACC II regulations will focus on post-2025 model year light-duty vehicles, as requirements are already in place for

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[42] *CARB, Advanced Clean Cars Program, About, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about, accessed July 6, 2023.*

[43] *CARB, Advanced Clean Cars Program, About, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about, accessed July 6, 2023.*

[44] *CARB, Advanced Clean Cars Program, About, ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/about, accessed July 6, 2023.*

[45] *CARB, News Release: CARB finds vehicle standards are achievable and cost-effective, ww2.arb.ca.gov/news/carb-finds-vehicle-standards-are-achievable-and-cost-effective, accessed July 6, 2023.*

new vehicles through the 2025 model year. A rulemaking package is anticipated to be presented to the Board in June 2022.

*(iv) Sustainable Communities and Climate Protection Act*

The Sustainable Communities and Climate Protection Act of 2008, or SB 375 (Chapter 728, Statutes of 2008), establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. SB 375 finds that the "transportation sector is the single largest contributor of greenhouse gases of any sector."[46] Under SB 375, CARB is required, in consultation with the Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. SCAG is the Metropolitan Planning Organization in which the City of Los Angeles is located in. CARB set targets for 2020 and 2035 for each of the 18 metropolitan planning organization regions in 2010, and updated them in 2018.[47] In March 2018, the CARB updated the SB 375 targets for the SCAG region to require an 8-percent reduction by 2020 and a 19-percent reduction by 2035 in per capita passenger vehicle GHG emissions.[48] As discussed further below, SCAG has adopted an updated Regional Transportation Plan/ Sustainable Community Strategies (RTP/SCS) subsequent to the update of the emission targets. The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the State's GHG emission reduction goals.[49]

Under SB 375, the target must be incorporated within that region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plans) are not required to be consistent with either the RTP or SCS.

*(v) Senate Bill 743*

Governor Jerry Brown signed Senate Bill (SB) 743 in 2013, which creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically,

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[46] *State of California, Senate Bill No. 375, September 30, 2008.*

[47] *CARB, Sustainable Communities & Climate Protection Program, About, ww2.arb.ca.gov/our-work/programs/sustainable-communities-climate-protection-program/about, accessed July 6, 2023.*

[48] *CARB, SB 375 Regional Greenhouse Gas Emissions Reduction Targets, 2018.*

[49] *SCAG, Final 2020–2045 RTP/SCS, Chapter 0: Making Connections, 2020, p. 5.*

SB 743 required the Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." Measurements of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

*(h) Building Standards*

*(i) California Appliance Efficiency Regulations*

The Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608), adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

*(ii) Title 24, Building Standards Code and CALGreen Code*

The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code and was developed to help the State achieve its GHG reduction goals under HSC Division 25.5 (e.g., AB 32) by codifying standards for reducing building-related energy, water, and resource demand, which in turn reduces GHG emissions from energy, water, and resource demand. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[50] The CALGreen Code is not intended to substitute for or be identified as meeting

[50] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality.[51]

On August 11, 2021, the CEC adopted the 2022 Title 24 Standards, which will come into effect on January 1, 2023. The 2022 standards continue to improve upon the previous (2019) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings.[52] The 2022 Title 24 Standards ensure that builders use the most energy efficient and energy conserving technologies and construction practices. The 2022 Title 24 standards encourage use of electric heat pumps, requiring newly constructed residences to be electric-ready and introduces solar and battery storage standards as an optional measure to achieve compliance and increases minimum ventilation requirements to improve air quality. Compliance with Title 24 is enforced through the building permit process.

*(i) CEQA Guidelines*

In August 2007, the California State Legislature adopted Senate Bill 97 (SB 97) (Chapter 185, Statutes of 2007), requiring the Governor's Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the Resources Agency by July 1, 2009. In response to SB 97, the OPR adopted CEQA guidelines that became effective on March 18, 2010.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the guidelines.[53] The guidelines require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Discretion is given to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, three factors are identified that should be considered in the evaluation of the significance of GHG emissions:

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[51] *California Building Standards Commission, 2010 California Green Building Standards Code, (2010).*

[52] *CEC, 2022 Building Energy Efficiency Standards.*

[53] *See 14 CCR Sections 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects) and 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).*

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;

2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[54]

The administrative record for the Guidelines Amendments also clarifies "that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act's requirements for cumulative impact analysis."[55]

## (3) Regional

### *(a) South Coast Air Quality Management District CEQA Guidance*

The City of Los Angeles is located in the South Coast Air Basin (Air Basin), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Gorgonio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) is responsible for air quality planning in the Air Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished through air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[56] A GHG Significance Threshold Working Group was formed to further evaluate potential GHG significance thresholds.[57] The SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 $MTCO_2e$ per year. Under this proposal, commercial/

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[54] *14 CCR Section 15064.4(b).*

[55] *Letter from Cynthia Bryant, Director of the Governor's Office of Planning and Research to Mike Chrisman, California Secretary for Natural Resources, dated April 13, 2009.*

[56] *SCAQMD, Board Meeting, December 5, 2008, Agenda No. 31, www3.aqmd.gov/hb/2008/December/081231a.htm, accessed July 6, 2023.*

[57] *SCAQMD, Greenhouse Gases CEQA Significance Thresholds, www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds, accessed July 6, 2023.*

residential projects that emit fewer than 3,000 $MTCO_2e$ per year would be assumed to have a less than significant impact on climate change. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects). The Working Group has been inactive since 2011, and SCAQMD has not formally adopted any GHG significance threshold for other jurisdictions.

*(b) SCAG Regional Transportation Plan/Sustainable Communities Strategy*

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2020–2046 Regional Transportation Plan/ Sustainable Communities Strategy (2020–2045 RTP/SCS) in October 2020. The vision for the region incorporates a range of best practices for increasing transportation choices, reducing dependence on personal automobiles, further improving air quality and encouraging growth in walkable, mixed-use communities with ready access to transit infrastructure and employment. More and varied housing types and employment opportunities would be located in and near job centers, transit stations and walkable neighborhoods where goods and services are easily accessible via shorter trips. To support shorter trips, people would have the choice of using neighborhood bike networks, car share or micro-mobility services like shared bicycles or scooters. For longer commutes, people would have expanded regional transit services and more employer incentives to carpool or vanpool. Other longer trips would be supported by on-demand services, such as microtransit, carshare, and citywide partnerships with ride hailing services. For those who choose to drive, hotspots of congestion would be less difficult to navigate due to cordon pricing, and using an electric vehicle will be easier as a result of an expanded regional charging network.

The 2020–2045 RTP/SCS states that the SCAG region was home to about 18.8 million people in 2016 and currently includes approximately 6.0 million homes and 8.4 million jobs.[58] By 2045, the integrated growth forecast projects that these figures will increase by 3.7 million people, with nearly 1.6 million more homes and 1.6 million more jobs. Transit Priority Areas[59] (TPAs) will account for less than 1 percent of regional total land but are projected to accommodate 30 percent of future household growth between 2016 and 2045. The 2020–2045 RTP/SCS overall land use pattern reinforces the trend of

[58] *2020–2045 RTP/SCS population growth forecast methodology includes data for years 2010, 2010, 2016, and 2045.*

[59] *Defined by the 2020–2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a major transit stop (rail or bus rapid transit station) with 15-minute or less service frequency during peak commute hours.*

focusing new housing and employment in the region's TPAs. TPAs are a cornerstone of land use planning best practices in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the State's GHG emission reduction goals.[60] Due to fuel economy and efficiency improvements, GHG emission rates of model year 2017 vehicles have decreased by 15 to 20 percent when compared to model year 2008 and earlier vehicles. However, for purposes of SB 375 emissions reduction targets, the fuel economy improvements have been largely excluded from the reduction calculation. The SB 375 target focuses on the amount of vehicle travel per capita. As discussed above, OPR recommended that achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals (i.e., SB 375 goal). The reductions generated by fuel economy improvements are already included as part of the State's GHG emissions reduction program and are not double-counted in the SB 375 target calculation.[61]

### (4) Local

#### *(a) Green New Deal*

The City of Los Angeles addressed the issue of global climate change in *Green LA, An Action Plan to Lead the Nation in Fighting Global Warming* ("LA Green Plan/ClimateLA") in 2007. This document outlines the goals and actions the City has established to reduce the generation and emission of GHGs from both public and private activities.

In April 2019, the Green New Deal (Sustainable City Plan 2019), was released, consisting of a program of actions designed to create sustainability-based performance targets through 2050 designed to advance economic, environmental, and equity objectives.[62] L.A.'s Green New Deal is the first four-year update to the City's first Sustainable City pLAn that was released in 2015.[63] It augments, expands, and elaborates

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[60] *SCAG, Final 2020–2045 RTP/SCS, Making Connections, p. 5, May 7, 2020.*

[61] *CARB. SB 375 Regional Greenhouse Gas Emissions Reduction Targets. Appendix A.*

[62] *City of Los Angeles. LA's Green New Deal, 2019.*

[63] *City of Los Angeles, Sustainable City pLAn, April 2015.*

L.A.'s vision for a sustainable future and tackles the climate emergency with accelerated targets and new aggressive goals.

While not a plan adopted solely to reduce GHG emissions, within the Green New Deal, "Climate Mitigation," or reduction of GHG is one of eight explicit benefits that help define its strategies and goals.

*(b) City of Los Angeles Green Building Code*

On December 11, 2019, the Los Angeles City Council approved Ordinance No. 186,488, which amended Chapter IX of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, by adding a new Article 9 to incorporate various provisions of the 2019 CALGreen Code. Projects filed on or after January 1, 2020, must comply with the provisions of the Los Angeles Green Building Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. Article 9, Division 5 includes mandatory measures for newly constructed nonresidential and high-rise residential buildings.

Chapter IX of the LAMC also requires that all new buildings be all-electric buildings, with some exceptions. Equipment typically powered by natural gas such as space heating, water heating, cooking appliances, and clothes drying would need to be powered by electricity for new construction. Exceptions are made for commercial restaurants, laboratory, and research and development uses. The LAMC is consistent with 2022 Title 24 goals of encouraging all-electric development which requires new residential uses to be electric-ready (wiring installed for all-electric appliances). Buildings in Los Angeles account for 43 percent of greenhouse gas emissions—more than any other sector in the City. These LAMC requirements ensure that new buildings being constructed are built to leverage the increasingly clean electric grid, which is anticipated to be carbon-free by 2045, rather than relying on fossil fuels. SB 1020 requires retail energy sales to be 90 percent renewable/zero carbon by 2035, 95 percent by 2040, and 100 percent by 2045.

*(c) City of Los Angeles Solid Waste Programs and Ordinances*

The recycling of solid waste materials also contributes to reduced energy consumption. Specifically, when products are manufactured using recycled materials, the amount of energy that would have otherwise been consumed to extract and process virgin source materials is reduced as well as disposal energy averted. In 1989, California enacted AB 939, the California Integrated Waste Management Act, which establishes a hierarchy for waste management practices such as source reduction, recycling, and environmentally safe land disposal.

The City has developed and is in the process of implementing the Solid Waste Integrated Resources Plan, also referred to as the Zero Waste Plan, whose goal is to lead the City towards being a "zero waste" City by 2030. These waste reduction plans, policies, and regulations, along with Mayoral and City Council directives, have increased the level of waste diversion for the City to 76 percent as of 2013.[64] The RENEW LA Plan, aims to achieve a zero waste goal through reducing, reusing, recycling, or converting the resources not going to disposal and achieving a diversion rate of 90 percent or more by 2025.[65] The City has also approved the Waste Hauler Permit Program (Ordinance No. 181,519, LAMC Chapter VI, Article 6, Section 66.32-66.32.5), which requires private waste haulers to obtain AB 939 Compliance Permits to transport construction and demolition waste to City-certified construction and demolition waste processors. The City's Exclusive Franchise System Ordinance (Ordinance No. 182,986), among other requirements, sets a maximum annual disposal level and diversion requirements for franchised waste haulers to promote waste diversion from landfills and support the City's zero waste goals. These programs reduce the number of trips to haul solid waste and therefore reduce the amount of petroleum-based fuels and energy used to process solid waste.

*(d) City of Los Angeles General Plan*

The City does not have a General Plan Element specific to climate change and GHG emissions, but several goals, objectives, or policies in the Air Quality Element, Housing Element, Plan for Healthy LA, and Mobility Plan 2035 encourage the reduction of emissions. However, the following five goals from the City's General Plan Air Quality Element would also serve to reduce GHG emissions:[66]

- Less reliance on single-occupancy vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;

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[64] *City of Los Angeles, Department of Public Works, LA Sanitation, Recycling. www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-s/s-lsh-wwd-s-r?_adf.ctrl-state=kq9mn3h5a_188, accessed July 6, 2023.*

[65] *City of Los Angeles, RENEW LA, Five-Year Milestone Report, 2011.*

[66] *City of Los Angeles, Air Quality Element, June 1991, pp. IV-1 to IV-4.*

- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures, such as site orientation and tree planting; and

- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

*(d) Transportation Study Policies and Procedures*

The City of Los Angeles Department of Transportation (LADOT) has developed the City Transportation Assessment Guidelines (TAG) (July 2019, updated July 2020) to provide the public, private consultants, and City staff with standards, guidelines, objectives, and criteria to be used in the preparation of a transportation assessment. The TAG establishes the reduction of vehicle trips and VMT as the threshold for determining transportation impacts and thus is an implementing mechanism of the City's strategy to reduce land use transportation-related GHG emissions consistent with AB 32, SB 32, and SB 375.

*(e) Los Angeles Department of Transportation Mobility Plan 2035*

In August 2015, the City Council adopted Mobility Plan 2035 (Mobility Plan), which serves as the City's General Plan circulation element. The City Council has adopted several amendments to the Mobility Plan since its initial adoption, including the most recent amendment on September 7, 2016.[67] The Mobility Plan incorporates "complete streets" principles and lays the policy foundation for how the City's residents interact with their streets. While the Mobility Plan 2035 mainly relates to transportation, certain components would serve to reduce VMT and mobile source GHG emissions. One component of the Mobility Plan is a GHG emission tracking program to establish compliance with SB 375, AB 32 and the regions Sustainable Community Strategy.

*(f) City of LA Housing Element (Housing Needs Assessment)*

The Housing Element of the General Plan is prepared pursuant to state law and provides planning guidance in meeting housing needs identified in the SCAG Regional Housing Needs Assessment (RHNA). The Housing Element identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing and growth strategy, and provides the array of programs the City intends to implement to create and preserve sustainable, mixed-income neighborhoods across the City.

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[67] *Los Angeles Department of City Planning, Mobility Plan 2035: An Element of the General Plan, approved by City Planning Commission on June 23, 2016, and adopted by City Council on September 7, 2016.*

The Housing Needs Assessment chapter of the Housing Element discusses the City's population and housing stock to identify housing needs to a variety of household types across the City. The Housing Element establishes quantified objectives which set a reasonable target goal based on needs, resources, and constraints. The amount of housing the City needs to plan for is based on the Regional Housing Needs Assessment (RHNA) allocation which is set by the California Department of Housing and Community Development. The current RHNA goal for affordable housing within the City is approximately forty percent of new construction. However, the City's projections show affordable housing comprising of twenty percent of new construction, which falls short of the forty percent RHNA goal.

In order to address this shortfall in affordable housing, the Housing Element provides measures to streamline and incentivize development of affordable housing. Such measures include revising density bonuses for affordable housing; identify locations which are ideal for funding programs to meet low-income housing goals; and rezone areas to encourage low-income housing. With implementation of such measures to increase affordable housing, the Housing Element predicts a significant increase in housing production at all income ranges compared to previous cycles.

## d. Existing Conditions

### (1) Existing Statewide GHG Emissions

GHG emissions are the result of both natural and human-influenced activities. Regarding human-influenced activities, motor vehicle travel, consumption of fossil fuels for power generation, industrial processes, heating and cooling, landfills, agriculture, and wildfires are the primary sources of GHG emissions. Without human intervention, Earth maintains an approximate balance between the emission of GHGs into the atmosphere and the storage of GHGs in oceans and terrestrial ecosystems. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have contributed to the rapid increase in atmospheric levels of GHGs over the last 150 years. As reported by the CEC, California contributes one percent of global and six percent of national GHG emissions.[68] California represents approximately 12 percent of the national population. Approximately 80 percent of GHGs in California consist of $CO_2$ produced from fossil fuel combustion. The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2002 to

[68] *CEC, Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004, CEC-600-2006-013, October 2006.*

2019.[69] It includes estimates for $CO_2$, $CH_4$, $N_2O$, HFCs, PFCs, and $SF_6$. The GHG inventory for California for years 2014 through 2020 is presented in Table IV.E-5 on page IV.E-40.

As shown in Table IV.E-5, the GHG inventory for California in 2020, the most recent year for which data is available, was 369.2 million $MTCO_2e$, which achieves the AB 32 target of reducing statewide GHG emissions to below 1990 levels (431 million $MTCO_2e$) by 2020.[70]

### (2) Existing Project Site Emissions

The Project Site is currently occupied by three structures, including a two-story Barnes & Noble bookstore located along the northeast corner of the Project Site, near the Maxella Avenue and Glencoe Avenue intersection; a single-story building providing a variety of retail uses located generally within the southern portion of the Project Site, along Glencoe Avenue; a two-story commercial and retail building located generally within the western portion of the Project Site; and surface parking and circulation areas. Vehicular access to the Project Site is currently available via driveways on Maxella Avenue and Glencoe Avenue. Pedestrian access is available from the vehicular access points and from other areas along Maxella Avenue and Glencoe Avenue.

Mobile source emissions are generated by motor vehicle trips to and from the Project Site. Area source emissions are generated by the use of maintenance equipment, landscape equipment, and products that contain solvents. Energy source emissions are typically associated with building natural gas usage. Methodology to calculate existing emissions is discussed in more detail in the methodology subsection included in Subsection 3.b below. Table IV.E-6 on page IV.E-42 presents an estimate of the existing emissions within the Project Site.

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[69] *A carbon inventory identifies and quantifies sources and sinks of greenhouse gases. Sinks are defined as a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period.*

[70] *CARB, Climate pollutants fall below 1990 levels for first time, ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time, accessed July 6, 2023.*

**Table IV.E-5**
**California GHG Inventory**
**(million metric tons $CO_2e$)**

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| **Transportation** | 157.7 | 161.5 | 165.2 | 166.6 | 165.3 | 162.4 | 135.8 |
| *On Road* | 146.2 | 150.0 | 154.0 | 155.4 | 153.6 | 151.3 | 126.4 |
| Passenger Vehicles | 110.2 | 114.4 | 117.1 | 117.5 | 116.6 | 116.2 | 94.1 |
| Heavy Duty Trucks | 36.0 | 35.6 | 37.0 | 37.9 | 37.0 | 35.1 | 32.3 |
| *Ships & Commercial Boats* | 4.0 | 3.7 | 3.6 | 3.7 | 3.6 | 3.7 | 3.8 |
| *Aviation (Intrastate)* | 3.9 | 4.2 | 4.4 | 4.7 | 4.6 | 4.4 | 2.9 |
| *Rail* | 1.9 | 1.7 | 1.5 | 1.3 | 1.9 | 1.4 | 1.3 |
| *Unspecified* | 1.7 | 1.9 | 1.6 | 1.5 | 1.5 | 1.7 | 1.4 |
| *Percent of Total Emissions* | 37% | 38% | 40% | 41% | 40% | 40% | 37% |
| **Industrial** | 85.2 | 83.2 | 81.6 | 81.7 | 81.9 | 80.4 | 73.3 |
| *Off-Road* | 1.8 | 1.8 | 1.8 | 1.9 | 2.4 | 2.5 | 1.8 |
| *Refineries and Hydrogen Production* | 29.9 | 28.5 | 29.9 | 30.2 | 30.2 | 28.8 | 25.8 |
| *General Fuel Use* | 13.2 | 12.8 | 12.8 | 12.6 | 12.5 | 13.7 | 12.3 |
| Diesel | 0.5 | 0.6 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 |
| Natural Gas | 8.7 | 8.6 | 9.2 | 8.9 | 9.4 | 10.6 | 9.2 |
| Other Fuels | 4.0 | 3.7 | 3.2 | 3.2 | 2.6 | 2.7 | 2.7 |
| *Oil & Gas: Production & Processing*[a] | 17.8 | 17.9 | 15.3 | 15.4 | 14.3 | 13.8 | 12.0 |
| Fuel Use | 16.2 | 16.3 | 13.8 | 13.9 | 12.7 | 12.0 | 10.2 |
| Fugitive Emissions | 1.6 | 1.6 | 1.5 | 1.5 | 1.7 | 1.8 | 1.8 |
| *Cement Plants* | 7.7 | 7.5 | 7.6 | 7.7 | 7.8 | 7.8 | 7.5 |
| Clinker Production | 4.8 | 4.7 | 4.7 | 4.9 | 5.0 | 4.9 | 4.7 |
| Fuel Use | 2.9 | 2.8 | 2.9 | 2.8 | 2.9 | 2.9 | 2.3 |
| *Cogeneration Heat Output* | 7.2 | 6.8 | 6.4 | 6.1 | 6.8 | 6.0 | 6.2 |
| *Other Fugitive and Process Emissions* | 7.7 | 7.9 | 7.8 | 7.9 | 7.9 | 7.8 | 7.7 |
| Natural Gas Transmission & Distribution | 4.0 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.2 |
| Manufacturing | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Wastewater Treatment | 1.9 | 7.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 |
| Other | 1.6 | 1.7 | 1.7 | 1.7 | 1.8 | 1.6 | 1.6 |
| *Percent of Total Emissions* | 20% | 20% | 20% | 20% | 20% | 20% | 20% |
| **Electric Power** | 89.8 | 86.0 | 70.4 | 64.2 | 65.0 | 60.2 | 59.5 |
| *In-State Generation* | 53.0 | 52.0 | 44.1 | 40.2 | 40.4 | 38.5 | 40.9 |
| Diesel | 0.03 | 0.03 | 0.04 | 0.03 | 0.03 | 0.03 | 0.02 |
| Natural Gas | 48.6 | 47.8 | 40.0 | 36.7 | 36.9 | 35.1 | 38.2 |
| Other Fuels | 3.4 | 3.0 | 2.6 | 2.6 | 2.6 | 2.6 | 1.9 |
| Fugitive and Process Emissions | 0.9 | 1.2 | 1.5 | 0.9 | 0.9 | 0.8 | 0.8 |
| *Imported Electricity* | 36.8 | 33.9 | 26.4 | 23.9 | 24.6 | 21.7 | 18.6 |
| *Unspecified Imports* | 13.5 | 11.2 | 9.7 | 8.9 | 11.6 | 9.9 | 8.8 |

**Table IV.E-5 (Continued)**
**California GHG Inventory**
**(million metric tons $CO_2e$)**

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| *Specified Imports* | 23.4 | 22.7 | 16.7 | 15.1 | 13.0 | 11.8 | 9.8 |
| *Percent of Total Emissions* | 21% | 20% | 17% | 16% | 16% | 15% | 16% |
| **Commercial and Residential** | 35.6 | 36.3 | 37.2 | 37.6 | 37.4 | 40.5 | 38.7 |
| *Residential Fuel Use* | 22.3 | 22.9 | 23.4 | 24.0 | 23.4 | 25.9 | 25.3 |
| Diesel | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| Natural Gas | 20.1 | 20.6 | 21.0 | 21.6 | 20.9 | 23.2 | 22.8 |
| Other Fuels | 1.3 | 1.4 | 1.5 | 1.5 | 1.6 | 1.7 | 1.6 |
| Fugitive Emissions | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| *Commercial Fuel Use* | 11.4 | 11.6 | 11.9 | 11.7 | 12.1 | 12.7 | 11.6 |
| Diesel | 1.0 | 1.1 | 1.0 | 0.8 | 1.0 | 0.8 | 0.7 |
| Natural Gas | 9.7 | 9.9 | 10.1 | 10.2 | 10.0 | 10.5 | 9.3 |
| Other Fuels | 0.7 | 0.6 | 0.8 | 0.8 | 1.1 | 1.4 | 1.7 |
| *Commercial Cogeneration Heat Output* | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 |
| *Other Commercial and Residential* | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| *Percent of Total Emissions* | 8% | 9% | 9% | 9% | 9% | 10% | 10% |
| **Agriculture[d]** | 33.9 | 32.6 | 32.2 | 31.7 | 32.2 | 31.4 | 31.6 |
| *Livestock* | 23.4 | 22.9 | 22.6 | 22.9 | 22.8 | 22.6 | 22.6 |
| Enteric Fermentation (Digestive Process) | 11.3 | 11.0 | 10.9 | 11.1 | 11.1 | 11.0 | 11.0 |
| Manure Management | 12.1 | 11.9 | 11.6 | 11.8 | 11.7 | 11.6 | 11.6 |
| *Crop Growing & Harvesting* | 6.9 | 6.5 | 6.7 | 6.6 | 6.7 | 6.7 | 6.8 |
| Fertilizers | 5.5 | 4.9 | 5.0 | 5.1 | 5.1 | 5.1 | 5.2 |
| Soil Preparation and Disturbances | 1.4 | 1.5 | 1.6 | 1.4 | 1.5 | 1.5 | 1.5 |
| Crop Residue Burning | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| *General Fuel Use* | 3.5 | 3.2 | 2.8 | 2.3 | 2.7 | 2.1 | 2.3 |
| Diesel | 2.5 | 2.6 | 2.2 | 1.7 | 2.1 | 1.6 | 1.7 |
| Natural Gas | 0.5 | 0.6 | 0.6 | 0.5 | 0.6 | 0.5 | 0.6 |
| Gasoline | 0.5 | 0.1 | 0.04 | 0.05 | 0.01 | 0.01 | 0.02 |
| Other Fuels | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| *Percent of Total Emissions* | 8% | 8% | 8% | 8% | 8% | 8% | 9% |
| **High Global Warming Potential** | 17.7 | 18.6 | 19.4 | 20.1 | 20.5 | 20.7 | 21.3 |
| *Ozone Depleting Substance Substitutes* | 17.4 | 18.3 | 19.0 | 19.6 | 20.1 | 20.3 | 20.8 |
| *Electricity Grid SF6 Losses[c]* | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 |
| *Semiconductor Manufacturing[b]* | 0.1 | 0.1 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| *Percent of Total Emissions* | 4% | 4% | 5% | 5% | 5% | 5% | 6% |
| **Recycling and Waste** | 8.3 | 8.4 | 8.5 | 8.6 | 8.7 | 8.8 | 8.9 |
| *Landfills[b]* | 8.0 | 8.1 | 8.2 | 8.3 | 8.3 | 8.4 | 8.5 |
| *Composting* | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 |

**Table IV.E-5 (Continued)**
**California GHG Inventory**
**(million metric tons $CO_2e$)**

| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| *Percent of Total Emissions* | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| **Total Net Emissions** | **428.2** | **426.6** | **414.4** | **410.6** | **411.0** | **404.5** | **369.2** |

[a] *Reflects emissions from combustion of fuels plus fugitive emissions.*

[b] *These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.*

[c] *This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors.*

[d] *Reflects use of updated USEPA models for determining emissions from livestock and fertilizers.*

*Source: California GHG Inventory for 2000–2020—by Category as Defined in the 2008 Climate Change Scoping Plan million metric tons of $CO_2e$—(based upon IPCC Fourth Assessment Report's Global Warming Potentials).*

**Table IV.E-6**
**Existing Project Site Annual GHG Emissions Summary**

| Scope | Metric Tons of Carbon Dioxide Equivalent[a] ($MTCO_2e$) |
|---|---|
| Area | 2 |
| Energy | 300 |
| Mobile | 3,555 |
| Solid Waste | 8 |
| Refrigeration | <1 |
| Water/Wastewater Generation | 22 |
| Total Emissions | 3,887 |

*Numbers may not add up exactly due to rounding.*

[a] *$CO_2e$ was calculated using CalEEMod and the results are provided in Section 2.0 of the CalEEMod output file (Paseo Marina Baseline) within Appendix B of this Recirculated Draft EIR.*

*Source: Eyestone Environmental, 2023.*

# 3. Project Impacts

## a. Thresholds of Significance

### (1) State CEQA Guidelines Appendix G

In accordance with Appendix G of the State CEQA Guidelines, the Project would have a significant impact related to GHGs if it would:

***Threshold (a): Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;***

***Threshold (b): Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.***

CEQA Guidelines Section 15064.4 provides that a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. It also states that the lead agency shall have the discretion to determine, in the context of a particular project, whether to (1) quantify GHG emissions resulting from a project and/or (2) rely on a qualitative analysis or performance based standards. Lead agencies should consider several factors when determining the significance of GHG emissions from a project: the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting; whether a project exceeds a significance threshold that the lead agency determines applies to the project; and the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional or local plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines Section 15064.4 does not establish any threshold of significance. Lead agencies have the discretion to establish significance thresholds for their respective jurisdictions, and in establishing those thresholds, a lead agency may appropriately look to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), as long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). The CEQA Guidelines also clarify that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15130(f)).[71] It is noted that the CEQA Guidelines were amended in response to SB 97 to specify that compliance with a GHG emissions reduction plan renders a cumulative impact insignificant.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that would avoid or substantially lessen the cumulative problem within the geographic area of the project.[72] To qualify, such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review

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[71] *See, generally, Section 15130(f); see also Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, dated April 13, 2009.*

[72] *14 CCR Section 15064(h)(3).*

process to implement, interpret, or make specific the law enforced or administered by the public agency.[73] Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plans [and] plans or regulations for the reduction of greenhouse gas emissions."[74] Therefore, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of a less than significant impact for cumulative GHG emissions if a project complies with adopted programs, plans, policies and/or other regulatory strategies to reduce GHG emissions.[75]

The City has not adopted a numeric threshold for the analysis of GHG impacts. In the absence of any applicable adopted numeric threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. For this Project, as a land use development project, the applicable adopted regulatory plan to reduce GHG emissions is SCAG's 2020–2045 RTP/SCS, which is designed to achieve regional GHG reductions from the land use and transportation sectors as required by SB 375 and the State's long-term climate goals. This analysis also considers qualitative consistency with regulations or requirements adopted by AB 32's Climate Change Scoping Plan and subsequent updates and the L.A.'s Green New Deal.

### (2) SCAQMD Thresholds

As discussed above, SCAQMD has an interim GHG significance threshold of 10,000 $MTCO_2e$ per year for stationary source/industrial projects where SCAQMD is the lead

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[73] *14 CCR Section 15064(h)(3).*

[74] *14 CCR Section 15064(h)(3).*

[75] *See, for example, San Joaquin Valley Air Pollution Control District, CEQA Determinations of Significance tor Projects Subject to ARB's GHG Cap-and-Trade Regulation, APR—2030 (June 25, 2014), in which the SJVAPCD "determined that GHG emissions increases that are covered under ARB's Cap-and-Trade regulation cannot constitute significant increases under CEQA…" Further, the South Coast Air Quality Management District (SCAQMD) has taken this position in CEQA documents it has produced as a lead agency. SCAQMD has prepared three Negative Declarations and one Draft Environmental Impact Report that demonstrate SCAQMD has applied its 10,000 MTCO2e/yr. significance threshold in such a way that GHG emissions covered by the Cap-and-Trade Program do not constitute emissions that must be measured against the threshold. See: SCAQMD, Final Negative Declaration for: Ultramar Inc. Wilmington Refinery Cogeneration Project, SCH No. 2012041014 (October 2014); SCAQMD, Final Negative Declaration tor Phillips 66 Los Angeles Refinery Carson Plant—Crude Oil Storage Capacity Project, SCH No. 2013091029 (December 2014); Final Mitigated Negative Declaration for Toxic Air Contaminant Reduction for Compliance with SCAQMD Rules 1420.1 and 1402 at the Exide Technologies Facility in Vernon, CA, SCH No. 2014101040 (December 2014); and Draft Environmental Impact Report for the Breitburn Santa Fe Springs Blocks 400/700 Upgrade Project, SCH No. 2014121014 (April 2014).*

agency. This SCAQMD interim GHG significance threshold is not applicable to the Project because it is a mixed-use residential and commercial project, and the City is the Lead Agency.

### (3) City Thresholds

The L.A. CEQA Thresholds Guide does not identify criteria to evaluate GHG emissions impacts. Thus, the potential for the Project to result in impacts from GHG emissions is based on the CEQA Guidelines Appendix G thresholds above. To answer both of those threshold questions, the City considers whether the Project is consistent with the following plans:

- AB 32's Scoping Plan and Subsequent Updates
- SCAG's 2020–2045 RTP/SCS
- L.A.'s Green New Deal

As discussed above, OPR has noted that lead agencies "should make a good-faith effort to calculate or estimate GHG emissions" from a project.[76] GHG emissions are quantified below, consistent with OPR guidelines.

## b. Methodology

Amendments to CEQA Guidelines Section 15064.4 were adopted to assist lead agencies in determining the significance of the impacts of GHG emissions. Consistent with existing CEQA practice, Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively.

The City has not adopted a numerical significance threshold for assessing impacts related to GHG emissions and has not adopted a local climate action plan for reducing GHG emissions. Nor have the SCAQMD, OPR, CARB, CAPCOA, or any other state or regional agency adopted a numerical significance threshold for assessing GHG emissions that is applicable to the Project. Since the City has not adopted any numerical threshold of significance for GHG emissions, the methodology for evaluating the Project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the Project's GHG-related impacts on the environment consistent with CEQA Guidelines

[76] *OPR Technical Advisory, p. 5.*

section 15064.4. Based on CEQA case law, when no guidance exists, the lead agency may look to and assess general compliance with comparable regulatory schemes.[77]

Notwithstanding, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described below. The primary purpose of quantifying the Project's GHG emissions is to satisfy State CEQA Guidelines Section 15064.4(a), which calls for a good-faith effort to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions.

In summary, as the lead agency, the City has determined that a project's significant impact with regard to climate change be evaluated solely on the basis of consistency with the climate change plans. This approach is aligned with the threshold of significance established by the City for the Project, which is whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions, as noted above. Also as noted above, for informational purposes only, this Recirculated Draft EIR estimates the quantity of GHGs the Project would emit. This estimate informs the public and the decision makers of the extent to which the Project may increase or reduce GHGs compared to existing conditions.

### (1) Consistency with Plans

The Project's GHG impacts were evaluated by assessing the Project's consistency with applicable statewide, regional, and local GHG reduction plans and strategies. As discussed previously, the Project was evaluated for consistency with the Scoping Plan, SCAG's 2020–2045 RTP/SCS, and L.A.'s Green New Deal.

Appendix D, Local Actions, of the 2022 Scoping Plan Update includes "recommendations intended to build momentum for local government actions that align with the State's climate goals, with a focus on local GHG reduction strategies (commonly

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[77] *See Protect Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal. App. 4th 1099, 1107 ["[A] lead agency's use of existing environmental standards in determining the significance of a project's environmental impacts is an effective means of promoting consistency in significance determinations and integrating CEQA environmental review activities with other environmental program planning and resolution."]. Lead agencies can, and often do, use regulatory agencies' performance standards. A project's compliance with these standards usually is presumed to provide an adequate level of protection for environmental resources. See, e.g., Cadiz Land Co. v. Rail Cycle (2000) 83 Cal.App.4th 74, 99 (upholding use of regulatory agency performance standard).*

referred to as climate action planning) and approval of new land use development projects, including through environmental review under the California Environmental Quality Act (CEQA)." (Page 4 of Appendix D.)

The State encourages local governments to adopt a CEQA-qualified CAP addressing the three priority areas (transportation electrification, VMT reduction, and building decarbonization). However, the State recognizes that almost 50 percent of jurisdictions do not have an adopted CAP, among other reasons because they are costly, requiring technical expertise, staffing, funding. Additionally, CAPs need to be monitored and updated as State targets change and new data is available. Jurisdictions that wish to take meaningful climate action (such as preparing a non-CEQA-qualified CAP or as individual measures) aligned with the State's climate goals in the absence of a CEQA-qualified CAP are advised to look to the three priority areas when developing local climate plans, measures, policies, and actions: (transportation electrification, VMT reduction, and building decarbonization). "By prioritizing climate action in these three priority areas, local governments can address the largest sources of GHGs within their jurisdiction." (Page 9 of Appendix D.)

The State also recognizes in Appendix D, Local Actions, of the Scoping Plan that each community or local area has distinctive situations and local jurisdictions must balance the urgent need for housing[78] while demonstrating that a Project is in alignment with the State's Climate Goals. The State calls for the climate crisis and the housing crisis to be confronted simultaneously. Jurisdictions should avoid creating targets that are impossible to meet as a basis to determine significance. Ultimately, targets that make it more difficult to achieve statewide goals by prohibiting or complicating projects that are needed to support the State's climate goals, like infill development, low-income housing or solar arrays, are not consistent with the State's goals. The State also recognizes the lead agencies' discretion to develop evidence-based approaches for determining whether a project would have a potentially significant impact on GHG emissions.

OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. On a statewide level, the 2008 Climate Change Scoping Plan and subsequent updates provide measures to achieve AB 32 and SB 32 targets. On a regional level, SCAG's 2020–2045 RTP/SCS contains measures to achieve VMT reductions required under SB 375. The City does not have a programmatic mitigation plan to tier from, such as a Greenhouse Gas Emissions Reduction Plan as recommended in the relevant amendments to the CEQA Guidelines. L.A.'s Green New Deal is not an adopted plan or directly applicable to private development

[78] *The State recognizes the need for 2.5 million housing units over the next eight years, with one million being affordable units. See page 20, Appendix D, 2022 Scoping Plan Update, November 2022.*

projects. However, L.A.'s Green New Deal, a mayoral initiative, includes short-term and long-term aspirations pertaining to climate change and this analysis addresses consistency with these strategies and goals. Thus, if the Project is designed in accordance with these policies and regulations, the Project would result in a less than significant impact, because it would be consistent with the overarching State regulations on GHG reduction (AB 32).

A consistency analysis is provided and describes the Project's compliance with or exceedance of performance-based standards included in the regulations outlined in the applicable portions of the *Scoping*, SCAG's 2020–2045 RTP/SCS, and L.A.'s Green New Deal.

### (2) Quantification of Emissions

As noted above, this Recirculated Draft EIR quantifies the total annual GHG emissions of the Project for informational purposes. By quantifying the Project's annual GHG emissions, this EIR will provide context by then comparing those emissions to a Project without Reduction Features scenario, as defined by CARB's most updated projections for AB/SB 32, thereby providing quantitative metrics for describing the GHG footprint of the Project and the level of GHG reductions incorporated into the Project.[79] However, this comparison is being done for informational purposes only, as the use of this comparison as a threshold of significance, by itself, has also been called into question recently by the California Supreme Court.[80] The Project without Reduction Features scenario does not account for energy efficiency measures that would exceed the Title 24, Part 6 Building Energy Efficiency Standards, and does not account for trip reductions from co-location of uses, availability of public transportation, and the Project's TDM program. Therefore, the City has determined to focus its assessment of the Project's GHG emissions in relation to the Project's location and design and its consistency with local City of Los Angeles regulatory schemes, as explained below.

### (3) Project GHG Emissions

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG emissions from a number of general and industry-specific activities.[81] The General Reporting Protocol is based on the "Greenhouse Gas Protocol: A Corporate Accounting

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[79] *The comparison to a BAU scenario is not used as a threshold of significance, but is used to provide information and a quantitative metric to measure the Project's GHG emissions and level of reductions from Project Design Features and regulatory compliance measures.*

[80] *See Center for Biological Diversity, et al., supra.*

[81] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

and Reporting Standard" developed by the World Business Council for Sustainable Development and the World Resources Institute through "a multi-stakeholder effort to develop a standardized approach to the voluntary reporting of GHG emissions."[82] Although no numerical thresholds of significance have been developed, and no specific protocols are available for land use projects, the General Reporting Protocol provides a basic framework for calculating and reporting GHG emissions from the Project. The information provided in this section is consistent with the General Reporting Protocol's reporting requirements. A detailed discussion of the GHG methodology is included in Appendix B of this Recirculated Draft EIR.

The General Reporting Protocol and the USEPA recommend the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions.[83] They include the following:

- Scope 1: Direct, onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, offsite emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy (e.g., energy used to convey, treat, and distribute water and wastewater).[84]

The General Reporting Protocol provides a range of basic calculations methods. However, the General Reporting Protocol calculations are typically designed for existing buildings or facilities. These retrospective calculation methods are not directly applicable to planning and development situations where buildings do not yet exist.

CARB recommends consideration of indirect emissions to provide a more complete picture of the GHG footprint of a facility. Annually reported indirect energy usage aids the conservation awareness of a facility and provides information to CARB to be considered for future strategies.[85] For example, CARB has proposed requiring the calculation of direct

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[82] *California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.*

[83] *USEPA, Greenhouse Gases at EPA, www.epa.gov/greeningepa/greenhouse-gases-epa, accessed July 6, 2023.*

[84] *Embodied energy is a scientific term that refers to the quantity of energy required to manufacture and supply to the point of use a product, material, or service.*

[85] *CARB, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), Planning and Technical Support Division Emission Inventory Branch, October 19, 2007.*

and indirect GHG emissions as part of the AB 32 reporting requirements. Additionally, OPR has noted that lead agencies "should make a good-faith effort, based on available information, to calculate, model, or estimate … GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities."[86] Therefore, direct and indirect emissions have been calculated for the Project.

A fundamental difficulty in the analysis of GHG emissions is the global nature of the existing and cumulative future conditions. Changes in GHG emissions can be difficult to attribute to a particular planning program or project because the planning effort or project may cause a shift in the locale for some type of GHG emissions, rather than causing "new" GHG emissions. As a result, there is frequently an inability to conclude whether a project's GHG emissions represent a net global increase, reduction, or no change in GHGs that would exist if the project were not implemented. The analysis of the Project's GHG emissions is particularly conservative in that it assumes all of the GHG emissions are new additions to the atmosphere.

The California Emissions Estimator Model® (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California, who provided data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) to account for local requirements and conditions. The model is considered by SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.[87]

### (4) Construction

The Project's construction emissions were calculated using CalEEMod Version 2022.1. Details of the modeling assumptions and emission factors are provided in Appendix B of this Recirculated Draft EIR. CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecast based on the construction assumptions included in Appendix B and applying the mobile-source emissions factors derived from CalEEMod.

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[86] *OPR Technical Advisory—CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review, June 2008, p. 5.*

[87] *California Air Pollution Control Officers Association, California Emissions Estimator Model, CalEEMod™, www.caleemod.com.*

The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment that would be used to remove existing structures, to grade and excavate the Project Site, to construct the proposed buildings and related improvements, and to plant new landscaping within the Project Site.

As impacts from construction activities occur over a relatively short-term period of time, they contribute a relatively small portion of the overall lifetime project GHG emissions. GHG emission reduction measures for construction equipment are relatively limited. In accordance with SCAQMD's guidance, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the Project. SCAQMD defines the lifetime of a project as 30 years [88] Therefore, total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions.

### (5) Operation

Similar to construction, the SCAQMD-recommended CalEEMod is used to calculate potential direct and indirect GHG emissions generated by new land uses on the Project Site, including area sources, electricity, natural gas, mobile sources, stationary sources (i.e., emergency generators), solid waste generation and disposal, and water usage/wastewater generation. CalEEMod default values for generation/usage rates, GHG emission factors, and GWP values were used in the evaluation of operational GHG emissions from the Project.

Area source emissions include landscaping, natural gas combustion (HVAC and water heaters), and architectural coating activities, the emissions are based on the size of the land uses (e.g., square footage or dwelling unit), the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted.

Emissions of GHGs associated with electricity demand are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for LADWP were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year[89] based on LADWP projections for year 2026 (455 lbs of $CO_2$ per MWh). LADWP's carbon intensity projections also take into account SB 100 and SB 350 RPS requirements for renewable energy.

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[88] *SCAQMD, Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, 2008.*

[89] *It is noted that while the Project is anticipated to be completed in 2027, this analysis maintains a buildout of 2026 to provide a conservative analysis.*

As with electricity, the emissions of GHGs associated with natural gas combustion are based on the size of the land uses, the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu), the GHG emission factors for natural gas combustion, and the GWP values for the GHGs emitted. The Project would be required to comply with the City of LA's All-Electric ordinance which does not allow installation of natural gas-powered equipment (stoves, water heaters, space heating) for new construction with some exceptions. Restaurant uses would be exempt from this ordinance and be allowed to consume natural gas for cooking purposes. While this would decrease the natural gas usage for the Project, electricity usage would increase as a result.

Mobile source GHG emissions are calculated based on emission factors and an estimate of the Project's annual VMT, which was provided in the Project's Transportation Assessment.[90] As discussed in Section IV.K, Transportation, of this Recirculated Draft EIR, the Project VMT was derived from the LADOT VMT Calculator. The VMT Calculator was developed by the City and LADOT to comply with SB 743 which requires lead agencies to adopt VMT criteria to determine transportation related impacts. The LADOT-derived VMT values account for the daily and seasonal variations in trip frequency and length associated with new resident, employee, and visitor trips to and from the Project Site and other activities that generate a vehicle trip.

By default, CalEEMod calculates Project VMT based on the number of trips generated by the Project, multiplied by default trip lengths for Los Angeles County. However, for consistency, the Project's trips and VMT calculated by the LADOT VMT Calculator were input directly into CalEEMod. CalEEMod then converts EMFAC2017 emission rates into CalEEMod vehicle emission factors.[91] The LADOT VMT Calculator estimates the reduction in trips and VMT by calculating the internal capture of trips within mixed-use developments as well as walking and transit use for trips starting or ending in mixed-use developments. As discussed below, the analysis also takes into account actions and mandates already approved and expected to be in force by Project buildout (e.g., Pavley I Standards and the California LCFS).

Stationary source GHG emissions are based on proposed stationary sources (i.e., emergency generators) that would be provided on the Project Site.

The emissions of GHGs associated with solid waste disposal are based on the size of the Project's proposed land uses, the waste disposal rate for the land uses, the waste

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[90] *Linscott Law & Greenspan, Transportation Assessment for the Paseo Marina Project, July 2021.*

[91] *CAPCOA, California Emissions Estimator Model, Appendix A: Calculation Details for CalEEMod, May 2021.*

diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHGs emitted.

The GHG emissions related to water usage and wastewater generation are based on the size of the land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution, electrical intensity factors for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted. CalEEMod uses electricity intensity factors obtained from the 2006 CEC report, "Refining Estimates of Water-Related Energy Use in California" which represent the amount of electricity needed to transport and treat water. Water usage factors are obtained from surveys conducted throughout California for various land uses. Project water consumption GHG emissions are then quantified based on electricity usage and carbon intensity factors specific to electricity providers described above.

The GHG emissions calculations for the Project include credits or reductions for consistency with applicable project design features set forth in this Recirculated Draft EIR. The analysis of Project GHG emissions at buildout also takes into account actions and mandates already approved and expected to be in force by Project buildout (e.g., 2022 Title 24 Standards, Pavley I Standards, and full implementation of California's Statewide RPS beyond current levels of renewable energy assumed under SB 350).[92] It should be noted that GHG reductions due to the 2017 LCFS are not incorporated into the EMFAC2017 model which is used by CalEEMod to calculate mobile source emissions. In addition, as mobile source GHG emissions are directly dependent on the number of vehicle trips, a decrease in the number of project-generated trips as a result of project features (e.g., close proximity to transit) would provide a proportional reduction in mobile source GHG emissions compared to a generic project without such locational benefits. Calculation of Project emissions conservatively did not include actions and mandates that are not in CalEEMod and not already in place, but are anticipated to be enforced by Project buildout (e.g., Pavley II, which could further reduce GHG emissions from use of light-duty vehicles by 2.5 percent). Similarly, emissions reductions regarding cap-and-trade were not included in this analysis. By not speculating on potential regulatory conditions, the analysis takes a conservative approach that likely overestimates the Project's GHG emissions at buildout because the State is expected to continue to implement a number of policies and programs aimed at reducing GHG emissions from the land use and transportation sectors to meet the State's long-term climate goals.

[92] *Project design features are based on relevant year 2020 targets established by AB 32 and the current CARB Scoping Plan Update.*

## c. Project Design Features

The following project design features are applicable to the Project with regard to GHG emissions:

**GHG-PDF-1:** Buildings shall be designed and constructed to incorporate environmentally sustainable design features equivalent to a minimum Silver certification under the U.S. Green Building Council's LEED® Rating System for new construction.

The Project would also comply with all applicable State and local regulatory requirements, including the provisions set forth in the City's Green Building Ordinance. As an example, the Project would set aside a minimum area for potential installation of solar panels on high-rise multi-family buildings and non-residential buildings at a later date as required by Title 24. Furthermore, the Project would comply with the City's EV charging requirements, which specify that 10 percent of new parking spaces would require EV charging equipment. In addition, 30 percent of all new parking spaces would be required to be EV "ready," which will be capable of supporting future EV charging equipment. The Project would also comply with the City's Ordinance No. 187,714 (passed in December 2022), which requires all newly constructed buildings to be all electric. Cooking equipment contained within kitchens in a public use area, such as restaurants, commissaries, cafeterias, and community kitchens is exempt as long as electrical infrastructure is installed. The Project would also include water conservation and waste reduction measures as set forth in Section IV.M.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Recirculated Draft EIR.

## d. Analysis of Project Impacts

***Threshold (a): Would the Project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.***

***Threshold (b): Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG.***

### (1) Impact Analysis

#### *(a) Consistency with Applicable Plans and Policies*

As discussed above under Subsection 3.a(1) on page IV.E-42, compliance with applicable GHG emissions reduction plans would result in a less-than-significant Project and cumulative impact. The following section describes how the Project complies with or exceeds the performance-based standards included in the regulations outlined in AB 32's

2008 Climate Change Scoping Plan and subsequent updates, SCAG's 2020–2045 RTP/SCS, and L.A.'s Green New Deal. As shown herein, the Project would be consistent with the applicable GHG reduction plans and policies.

*(i) Climate Change Scoping Plan*

As discussed above, jurisdictions that want to take meaningful climate action (such as preparing a non-CEQA-qualified CAP or as individual measures) aligned with the State's climate goals in the absence of a CEQA-qualified CAP should also look to the three priority areas (transportation electrification, VMT reduction, and building decarbonization). To assist local jurisdictions, the 2022 Scoping Plan Update presents a non-exhaustive list of impactful GHG reduction strategies that can be implemented by local governments within the three priority areas (Priority GHG Reduction Strategies for Local Government Climate Action Priority Areas).[93] A detailed assessment of goals, plans, and policies implemented by the City which would support the GHG reduction strategies in the three priority areas is provided below. In addition, further details are provided regarding the correlation between these reduction strategies and applicable actions included in Table 2-1 (page 72) of the Scoping Plan (Actions for the Scoping Plan Scenario).

**Transportation Electrification**

The priority GHG reduction strategies for local government climate action related to transportation electrification are discussed below and would support the Scoping Plan action to have 100 percent of all new passenger vehicles to be zero-emission by 2035 (see Table 2-1 of the Scoping Plan).

- **Convert local government fleets to zero-emission vehicles (ZEV)**

The CARB approved the Advanced Clean Cars II rule which codifies Executive Order N-79-20 and requires 100 percent of new cars and light trucks sold in California be zero-emission vehicles by 2035. The State has also adopted AB 2127, which requires the CEC to analyze and examine charging needs to support California's EVs in 2030. This report would help decision-makers allocate resources to install new EV chargers where they are needed most.

The City's Green New Deal (Sustainable City pLAn 2019) identifies a number of measures to reduce VMT and associated GHG emissions. Such measures that would support the local reduction strategy include converting all city fleet vehicles to zero

93 *Table 1 of Appendix D, 2022 Scoping Plan Update, November 2022.*

emission where technically feasible by 2028. Starting in 2021, all vehicle procurement followed a "zero emission first" policy for City fleets. The Green New Deal also establishes a target to increase the percentage of zero emission vehicles to 25 percent by 2025, 80 percent by 2035 and 100 percent by 2050. In order to achieve this goal, the City would build 20 Fast Charging Plazas throughout the City. The City would also install 28,000 publicly available chargers by 2028 to encourage adoption of ZEVs.

The City's goals of converting the municipal fleet to zero emissions and installation of EV chargers throughout the City would be consistent with the Scoping Plan goals of transitioning to EVs. Although this measure mainly applies to City fleets, the Project would not conflict with these goals by installing EV chargers in at least 10 percent of total proposed parking spaces. Installation of additional EV chargers would encourage adoption of EVs.

- **Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans)**

The State has adopted AB 1236 and AB 970, which require cities to adopt streamline permitting procedures for EV charging stations. As a result, the City updated Section IX of the LAMC, which requires most new construction to designate 30 percent of new parking spaces as capable of supporting future EVSE. This would exceed the CALGreen 2022 requirements of 20 percent of new parking spaces as EV capable. The ordinance also requires new construction to install EVSE at 10 percent of total parking spaces. This requirement also exceeds the CALGreen 2022 requirements of installing EVSE for 25 percent of EV capable parking spaces which is approximately five percent of total parking spaces. The City has also implemented programs to increase the amount of EV charging on city streets, EV carshare, and incentive programs for apartments to be retrofitted with EV chargers.

The City's goals of installing EV chargers throughout the City would be consistent with the Scoping Plan goals of transitioning to EVs. In addition, the Project would comply with the LAMC by installing EV chargers in at least 10 percent of total proposed parking spaces which would exceed the CALGreen 2022 requirement. In addition, 30 percent of all new parking spaces would be required to be EV "ready," which will be capable of supporting future EV charging equipment.

### VMT Reduction

The priority GHG reduction strategies for local government climate action related to VMT reduction are discussed below and would support the Scoping Plan action to reduce

VMT per capita 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045.

- **Reduce or eliminate minimum parking standards in new developments**
- **Implement parking pricing or transportation demand management pricing strategies**

The Mobility Plan contains measures and programs related to VMT reduction throughout the City. With regard to parking standards, the implementation of Mobility Plan Programs and AB 2097 reduce or eliminate parking requirements for certain types of developments near transit (within half a mile). These reduction strategies and TDM programs would serve to reduce minimum parking standards and reduce vehicle trips.

Under both Option A and Option B, the Project would comply with existing applicable City ordinances (e.g., the City's existing TDM Ordinance, referred to in LAMC Section 12.26.J) as well as the TDM requirements of the Coastal Transportation Corridor Specific Plan. Therefore, the Project would be consistent and not conflict with this reduction strategy to reduce parking standards.

- **Implement Complete Streets policies and investments, consistent with general plan circulation element requirements**

The Mobility Plan established a "Complete Streets" planning framework which resulted in the City of Los Angeles Complete Streets Design Guide in 2015 consistent with California's Complete Streets Act of 2008. A supplemental update to the Complete Streets Design Guide was adopted in 2020.

The Complete Streets Design Guide provides a number of measures to increase public access to electric shuttles, car sharing and walking. The Design Guide establishes guidelines for establishing on-street parking for car sharing. The City has also established BlueLA which is a car sharing network consisting of more than 100 electric vehicles located throughout the City. In addition, under the Green New Deal, the City would install 28,000 publicly available chargers by 2028 and introduce 135 new electric DASH buses.

This reduction strategy mainly applies to City traffic circulation. However, the Project under Project Design Feature TR-PDF-2 would include pedestrian network improvements to encourage alternative modes of transportation. Therefore, the Project would not conflict with implementation of Complete Streets policies.

- **Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.**

- **Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking**

- **Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing the allowable density of a neighborhood)**

- **Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements).**

These reduction strategies are supported through implementation of SB 375 which requires integration of planning processes for transportation, land-use and housing and generally encourages jobs/housing proximity, promote transit-oriented development (TOD), and encourages high-density residential/commercial development along transit corridors. To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2020–2045 RTP/SCS, also referred to as Connect SoCal. The 2020–2045 RTP/SCS' "Core Vision" prioritizes the maintenance and management of the region's transportation network, expanding mobility choices by co-locating housing, jobs, and transit, and increasing investment in transit and complete streets. Please refer below for additional discussion of consistency with the 2020–2045 RTP/SCS.

On a local level, the City has developed the Complete Streets Design Guide which provides a number of reduction strategies to increase public access to electric shuttles, car sharing and walking, continues to build out networks in the Mobility Plan for pedestrians, bicyclists, and transit users, has implemented an EV car sharing network, and is working towards increasing publicly available chargers, and introducing new electric DASH buses.

The Project represents an infill development within an existing urbanized area that would concentrate new development consistent with the overall growth pattern encouraged in the RTP/SCS. The Project's convenient access to public transit and opportunities for walking and biking would result in a reduction of vehicle trips, VMT, and GHG emissions. Specifically, the Project Site is located in a transit-rich neighborhood serviced by the Los Angeles County Metropolitan Transit Authority (Metro) and LADOT bus lines. In addition, the Project Site's proximity to a variety of commercial uses and services would encourage residents and employees of the Project Site to walk or bike to nearby destinations to meet their shopping needs, thereby reducing VMT and GHG emissions. The Option B office component's proximity to existing and proposed housing would enable employees to walk

or bike to work, which would also reduce VMT and GHG emissions. Therefore, the Project would be consistent with these reduction strategies. While these reduction strategies mainly apply traffic circulation infrastructure within the City, the Project would support these reduction strategies.

California continues to experience a severe housing shortage. The State must plan for more than 2.5 million residential units over the next eight years, and no less than one million of those residential units must be affordable to lower-income households.[94] This represents more than double the housing planned for during the last eight years.[95] The housing crisis and the climate crisis must be confronted simultaneously, and it is possible to address the housing crisis in a manner that supports the State's climate and regional air quality goals.[96] CAPCOA's Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA's Handbook) provides a VMT reduction measurement for incorporation of low-income housing. Measure T-4 (Integrate Affordable and Below Market Rate Housing) shows a 28.6-percent reduction in VMT for low-income units in comparison to market rate units.

As discussed above, the City's Housing Element of the General Plan provides planning guidance in meeting housing needs identified in the SCAG Regional Housing Needs Assessment (RHNA). The current RHNA goal for affordable housing within the City is approximately forty percent of new construction. However, the City's projections show affordable housing comprising twenty percent of new construction, which falls short of the forty percent RHNA goal. In order to address this shortfall, the Housing Element identifies measures to encourage development of affordable housing such as revising density bonuses for affordable housing; identify locations which are ideal for funding programs to meet low-income housing goals; and rezone areas to encourage low-income housing. The Housing Element estimates that implementation of these measures would increase housing production at all income ranges compared to previous cycles.

The City's 40-percent goal of low-income housing for new construction is applicable on a citywide basis and not applicable to an individual project. The Planning Department Housing Division found, based on market studies and experiences of other agencies, that mandating 20-percent affordable housing on individual projects is likely to reduce overall

94 *California Department of Housing and Community Development, 2022 Statewide Housing Plan.*

95 *Ibid.*

96 *Elkind, E. N., Galante, C., Decker, N., Chapple, K., Martin, A., & Hanson, M. 2017. Right Type, Right Place: Assessing the Environmental and Economic Impacts of Infill Residential Development through 2030..*

housing production, including low income housing, in the City and would be contrary to City and State policies. Pushing more housing outside of the City would be contrary to the Scoping Plan, as infill housing production in the City, which is a highly urbanized city with billions in transit infrastructure, lower average VMT than the SCAG region, is called for in the 2022 Scoping Plan. The Project will provide 20 percent Low Income units or 10 percent Very Low Income units under both Option A and Option B. Moreover, the Project is located in a HQTA and represents an infill development that is surrounded by existing urban uses on a site currently served by existing utilities and public services. The Project also has a density that is supportive of transit with 106 du per acre and 70 du per acre for Option A and Option B, respectively.[97]

**Building Decarbonization**

The priority GHG reduction strategies for local government climate action related to electrification are discussed below and would support the Scoping Plan actions regarding meeting increased demand for electrification without new fossil gas-fire resources and all electric appliances beginning in 2026 (residential) and 2029 (commercial) (see Table 2-1 of the Scoping Plan).

- **Adopt all-electric new construction reach codes for residential and commercial uses**

California's transition away from fossil fuel–based energy sources will bring the project's GHG emissions associated with building energy use down to zero as our electric supply becomes 100 percent carbon free. California has committed to achieving this goal by 2045 through SB 100, the 100 Percent Clean Energy Act of 2018. SB 100 strengthened the State's Renewables Portfolio Standard (RPS) by requiring that 60 percent of all electricity provided to retail users in California come from renewable sources by 2030 and that 100 percent come from carbon-free sources by 2045. The land use sector will benefit from RPS because the electricity used in buildings will be increasingly carbon-free, but implementation does not depend (directly, at least) on how buildings are designed and built.

The City has updated the LAMC with requirements for all new buildings, with some exceptions to be all electric, which will reduce GHG emissions related to natural gas combustion. Space heating, water heating and cooking for non-restaurant uses would be required to be powered by electricity. In future years, the LADWP will be required to increase the amount of renewable energy in the power mix to comply with SB 100

[97] *The minimum density for transit-supportive development is 20 residential du per acre.*

requirements. The combination of the all-electric LAMC regulations and increasing availability of renewable energy will serve to reduce GHG emissions from sources traditionally powered by natural gas.

The Project would be required to comply with the City's All-Electric ordinance and would not include natural gas uses in residential, retail and office uses. The restaurant uses are exempt from the All-Electric ordinance, but would consist of a small portion of the total square footage. Therefore, the Project would be consistent and not conflict with the City's adopted All-Electric Ordinance.

- **Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers)**

This reduction strategy would support the Scoping Plan action regarding electrification of appliances in existing residential buildings (see Table 2-1 of the Scoping Plan). The City and Los Angeles Department of Water and Power has established rebate programs to promote use of energy-efficient products and home upgrades. Under the LADWP's Consumer Rebate Program (CRP), residential customers would receive rebates for energy-efficient upgrades such as Cool Roofs, Energy Star Windows, HVAC upgrades, pool pumps and insulation upgrades. Such upgrades would serve to reduce wasteful energy and water usage and associated GHG emissions.

The Project would not involve retrofit of existing buildings and would be completely new construction. However, the Project would implement Project Design Feature GHG-PDF-2 which states buildings shall be designed and constructed to incorporate environmentally sustainable design features equivalent to a minimum Silver certification under the U.S. Green Building Council's LEED® Rating System for new construction, which would result in increased energy efficiency. Therefore, the Project would be consistent and not conflict with policies to implement energy efficiency retrofits.

**Therefore, the Project would be consistent with the GHG reduction-related actions and strategies in AB 32's Climate Change Scoping Plan and impacts would be less than significant.**

*(ii) 2020–2045 RTP/SCS*

The purpose of SB 375 is to implement the State's GHG emissions reduction goals by integrating land use planning with the goal of reducing car and light-duty truck travel. Under SB 375, the primary goal of the 2020–2045 RTP/SCS is to provide a

framework for future growth that will decrease per capita GHG emissions from cars and light-duty trucks based on land use planning and transportation options. To accomplish this goal, the 2020–2045 RTP/SCS identifies various strategies to reduce per capita VMT. The 2020–2045 RTP/SCS is expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita passenger vehicle GHG emissions for specified target years.

In addition to demonstrating the region's ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2020–2045 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2020–2045 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. With regard to individual developments, such as the Project, strategies and policies set forth in the 2020–2045 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT; (2) increased use of alternative fuel vehicles; and (3) improved energy efficiency.[98] These strategies and policies are addressed below. Also, as explained immediately below, the Project is consistent with applicable growth forecasts.

Consistency with Integrated Growth Forecast

The 2020–2045 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review.

According to SCAG's 2020–2045 RTP/SCS, the forecasted population for the City of Los Angeles Subregion in 2023 is approximately 4,135,955 persons.[99] In 2027, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have a population of approximately 4,251,472 persons.[100] Therefore, the projected

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[98] *SCAG, Draft Program EIR for the 2020–2045 RTP/SCS, Section 3.8, Greenhouses, page 3.8-61, December 2019. The Draft Program EIR identifies program and project-level mitigation measures which includes improved energy efficiency (e.g., integrate green building measures consistent with CALGreen and local building codes).*

[99] *Based on a linear interpolation of 2016–2045 data. The 2023 extrapolated value is calculated using SCAG's 2016 and 2045 values to find the average increase between years and then applying that annual increase to 2023: ((4,771,300 – 3,933,800) ÷ 29)*7) + 3,933,800 = 4,135,955.*

[100] *Based on a linear interpolation of 2016–2045 data. The 2027 extrapolated value is calculated using SCAG's 2016 and 2045 values to find the average increase between years and then applying that annual increase to 2027 ((4,771,300 – 3,933,800) ÷ 29)*11) + 3,933,800 = 4,251,472.*

population growth between 2023 and 2027 is approximately 115,517 persons. Based on a household size factor of 2.25 persons per household for multi-family housing units, the Project under Option A is estimated to generate a residential population of 1,481 persons at full buildout.[101,102] The estimated 1,481 new residents generated by the Project under Option A would represent approximately 1.28 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2023 and 2027. The Project under Option B is estimated to generate a residential population of 957 persons.[103] The estimated 957 residents generated by the Project under Option B would represent approximately 0.83 percent of the population growth forecasted by SCAG in the City of Los Angeles Subregion between 2023 and 2027. Accordingly, the Project's generation of residents would be consistent with the population projections contained in the 2020–2045 RTP/SCS.

With regard to employment, development of the Project would result in approximately 82 employment positions under Option A and 480 employment positions under Option B.[104] According to SCAG's 2020–2045 RTP/SCS, the employment forecast for the City of Los Angeles Subregion in 2023 is approximately 1,917,721 employees.[105] In 2027, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have approximately 1,957,390 employees.[106] Therefore, the projected employment growth in the City between 2023 and 2027 based on SCAG's 2020–2045 RTP/SCS is approximately 39,669 employees. Thus, the Project's net increase of employees under Option A would constitute approximately 0.21 percent of the employment growth forecasted between 2023 and 2027. The Project's 480 estimated employees under

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[101] *Based on City of Los Angeles VMT Calculator Documentation, May 2020, Table 1, "Multi-Family Residential" rate of 2.25 persons per unit.*

[102] *658 * 2.25 = ~1,481 persons.*

[103] *425 * 2.25 = ~957 persons.*

[104] *Based on the City of Los Angeles Department of Transportation and Los Angeles Department of City Planning, City of Los Angeles VMT Calculator Documentation, May 2020, Table 1. Option A is based on the "General Retail" employee generation rate of 2 employees per 1,000 square foot applied to the proposed retail uses (13,650 square feet) and the "High-Turnover-Sit-Down Restaurant" employee generation rate of 4 employees per 1,000 square foot applied to the proposed restaurant uses (13,650 square feet). Option B is based on the "General Office" employee generation rate of 4 employees per 1,000 square foot applied to the proposed (90,000 square feet), the "General Retail" employee generation rate of 2 employees per 1,000 square foot applied to the proposed retail uses (20,000 square feet), and the "High-Turnover-Sit-Down Restaurant" employee generation rate of 4 employees per 1,000 square foot applied to the proposed restaurant uses (20,000 square feet).*

[105] *Based on a linear interpolation of 2016–2045 data. The 2023 extrapolated value is calculated using SCAG's 2016 and 2045 values to find the average increase between years and then applying that annual increase to 2023: ((2,135,900 – 1,848,300) ÷ 29) * 7) + 1,848,300 = 1,917,721.*

[106] *Based on a linear interpolation of 2016–2045 data. The 2027 extrapolated value is calculated using SCAG's 2016 and 2045 values to find the average increase between years and then applying that annual increase to 2027: ((2,135,900 – 1,848,300) ÷ 29) * 11) + 1,848,300 = 1,957,390.*

Option B would constitute approximately 1.21 percent of the employment growth forecasted between 2023 and 2027. Accordingly, the Project's generation of employment growth would be consistent with the employment projections contained in the 2020–2045 RTP/SCS. Refer to Section IV.H, Land Use and Planning, of this Recirculated Draft EIR, for additional information regarding consistency with the 2020–2045 RTP/SCS.

Consistency with VMT Reduction Strategies and Policies

The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the State's GHG emission reduction goals.[107] As discussed above, OPR recommends that achieving 15 percent lower per capita VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals. Incorporation of USEPA MXD VMT reduction features applicable to the Project results in a 19.4-percent reduction in overall VMT under Option A and an 18.8-percent reduction under Option B (35-percent reduction with incorporation of Mitigation Measure TR-MM-1). This reduction of VMT per capita is consistent with OPR's recommended reduction in VMT per capita to meet the State's GHG emission reduction goals. Furthermore, the Project would be designed and constructed to incorporate features to support and promote environmental sustainability. The Project is an infill development located in a SCAG-designated HQTA area that promotes alternative modes of transportation. The Project would also provide required short- and long-term bicycle parking spaces in compliance with the requirements of the LAMC. The increase in bicycle parking spaces provided on-site would further reduce vehicle trips and VMT by encouraging walking and non-automotive forms of transportation. Project design would also provide pedestrian access that minimizes barriers and links the Project Site with existing or planned external streets to encourage people to walk instead of drive.

Previously, trip generation for land uses was calculated based on survey data collected by the Institute of Transportation Engineers (ITE). However, these ITE trip generation rates were based on data collected at suburban, single-use, free-standing sites, which may not be representative of urban mixed-use environments. Beginning in 2019, the USEPA has sponsored a study to collect travel survey data from mixed-use developments in order provide a more representative trip generation rate for multi-use sites. Results of the USEPA survey indicate that trip generation and VMT are affected by factors, such as resident and job density, availability of transit, and accessibility of biking and walking paths. Based on these factors, the USEPA has developed equations known as the USEPA Mixed-Use Development (MXD) model to calculate trip reductions for multi-use

[107] *SCAG, Final 2020–2045 RTP/SCS, Making Connections, p. 5, September 3, 2020.*

developments.[108] The LADOT VMT Calculator incorporates the USEPA MXD model and accounts for project features such as increased density and proximity to transit, which would reduce VMT and associated fuel usage in comparison to free-standing sites. As shown in Appendix B, incorporation of USEPA MXD VMT reduction features applicable to the Project results in a 19.4-percent reduction under Option A and a 18.8-percent reduction under Option B (35-percent reduction with incorporation of Mitigation Measure TR-MM-1) in overall VMT and resultant GHG emissions.

The Project would also be consistent with the following key GHG reduction strategies in SCAG's 2020–2045 RTP/SCS, which are based on changing the region's land use and travel patterns:[109]

- New housing and job growth focused in HQTAs;
- Limit total acreage of greenfield or otherwise rural land uses converted to urban use; and
- Reduce VMT per capita.

As discussed above, the Project represents an infill development within an existing urbanized area that would introduce new residential, retail, restaurant, and office uses (under Option B), within a SCAG-designated HQTA that is well served by public transportation. The Project would also provide required short- and long-term bicycle parking spaces in compliance with the requirements of the LAMC. These and other measures would further promote a reduction in VMT and subsequent reduction in GHG emissions, which would be consistent with the goals of SCAG's 2020–2045 RTP/SCS.

Increased Use of Alternative Fueled Vehicles Policy Initiative

The second goal of the 2020–2045 RTP/SCS with regard to individual development projects, such as the Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. The 2020–2045 RTP/SCS policy initiative focuses on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. The Project would provide at least 30 percent of the total LAMC-required parking spaces provided to be capable of supporting future EVSE and at least 10 percent of the total LAMC-required parking spaces with EV charging stations as dictated by City requirements.

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[108] *USEPA, Mixed-Use Trip Generation Model. www.epa.gov/smartgrowth/mixed-use-trip-generation-model, accessed July 6, 2023.*

[109] *SCAG 2020–2045 RTP/SCS. Table 5.1 Connect SoCal Performance Measures and Results.*

Energy Efficiency Strategies and Policies

The third category of strategies and policies within the 2020–2045 RTP/SCS for individual developments, such as the Project, involves improving energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. The 2020–2045 RTP/SCS goal is to actively encourage and create incentives for energy efficiency, where possible. As discussed in Section II, Project Description, of this Recirculated Draft EIR, the Project has been designed and would be constructed to incorporate environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen Code. These standards would reduce energy and water usage and waste and, thereby, reduce associated GHG emissions and help minimize the impact on natural resources and infrastructure. The sustainability features to be incorporated into the Project would include, but not be limited to WaterSense-labeled plumbing fixtures and weather-based controller and drip irrigation systems to promote a reduction of indoor and outdoor water use; Energy Star–labeled appliances; and water-efficient landscape design. In addition, Project Design Feature GHG-PDF-1 would require the design of the new buildings to incorporate features to further reduce energy usage. Furthermore, the Project would be subject to the 2022 Title 24 standards.

Land Use Characteristics

At the regional level, the 2020–2045 RTP/SCS is a plan adopted for the purpose of reducing GHGs. In order to assess the Project's consistency with the 2020–2045 RTP/SCS, this Recirculated Draft EIR also analyzes the Project's land use characteristics for consistency with those utilized by SCAG in its SCS. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as the 2020–2045 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The Project's consistency with the applicable goals and principles set forth in the 2020–2045 RTP/SCS is discussed in Section IV.H, Land Use and Planning, of this Recirculated Draft EIR and detailed in Table 1 of Appendix G of this Recirculated Draft EIR. As shown in Table 1 of Appendix G, the Project is consistent with the land use goals and principles set forth in the 2020–2045 RTP/SCS that pertain to GHG emissions.

In sum, the Project is the type of land use development that is encouraged by the 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate

policies.[110] By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State regulatory requirements.

**Therefore, the Project would be consistent with the GHG reduction-related actions and strategies contained in the 2020–2045 RTP/SCS. As such, impacts related to consistency with the 2020–2045 RTP/SCS would be less than significant.**

*(iii) City of Los Angeles Sustainable City pLAn/L.A.'s Green New Deal*

As discussed above, L.A.'s Green New Deal, a mayoral initiative, includes both short-term and long-term aspirations through the year 2050 in various topic areas, including: water, renewable energy, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others. While not a plan adopted solely to reduce GHG emissions, within L.A.'s Green New Deal, climate mitigation is one of eight explicit benefits that help define its strategies and goals.

The Sustainable City pLAn/L.A.'s Green New Deal provides information as to what the City will do with buildings and infrastructure in its control and provides specific targets related to housing and development, as well as mobility and transit, including the reduction of VMT per capita by 13 percent by 2025, at least a 39 percent VMT per capita reduction by 2035. As noted above, the Sustainable City pLAn was updated in April 2019 and renamed as L.A.'s Green New Deal, which has established targets, such as 100-percent renewable energy by 2045, diversion of 100 percent of waste by 2050, and recycling 100 percent of wastewater by 2035. L.A.'s Green New Deal mainly targets GHG emissions related to City-owned buildings and operations (e.g., City operated utilities) and do not directly apply to new private development; however, discussion is provided on whether the project conflicts or will hamper the City in achieving the goals of the Green New Deal and whether the project will benefit from the City achieving these objectives. Table IV.E-7 on page IV.E-68 provides a discussion of the Project's consistency with applicable GHG-reducing actions from L.A.'s Green New Deal. As discussed therein, the Project would include increasing renewable energy usage, reduction of per capita water usage, promotion of walking and biking, and various recycling and trash diversion goals and would not conflict with or hinder the City's efforts in reaching the goals in L.A.'s Green New Deal.

Although L.A.'s Green New Deal is not an adopted plan or directly applicable to private development projects, the Project would generally be consistent with these aspirations because it is an infill mixed use development within an existing urbanized area

[110] *As discussed above, SB 375 legislation links regional planning for housing and transportation with the GHG reduction goals outlined in AB 32.*

**Table IV.E-7**
**Consistency with Applicable GHG Emissions Goals and Actions of the City's Green New Deal**

| Action | Description | Consistency Analysis |
|---|---|---|
| **Focus Area: Local Water** | | |
| Reduce potable water use per capita by 22.5% by 2025; and 25% by 2035; and maintain or reduce 2035 per capita water use through 2050 | The City would build upon the success of Save the Drop program and develop additional water conservation campaigns. In addition, the City would continue to benchmark customer use and improve data gathering to identify effective programs. | **No Conflict.** While this action primarily applies to the City and LADWP, the Project would incorporate water conservation features to reduce water use. Water usage rates were calculated consistent with the requirements under City Ordinance No. 184,248, the 2013 California Plumbing Code, 2019 CALGreen Code, 2014 Los Angeles Plumbing Code, and 2017 Los Angeles Green Building Code and reflects approximately a 20-percent reduction in water usage as compared to the base demand. Project-related GHG emissions from water-related sources also include implementation of Project Design Feature WAT-PDF-1 included in Section IV.M.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Recirculated Draft EIR. Therefore, the Project would not conflict with this goal of the City's Green New Deal. |
| **Focus Area: Clean and Healthy Buildings** | | |
| All new buildings will be net zero carbon by 2030; and 100% of buildings will be net zero carbon by 2050 | The City would perform a complete building electrification study and develop supporting programs. Financing would be expanded and improved to provide electrification existing energy efficiency and solar programs. | **Not Applicable.** While it is the City's responsibility to adopt plans and regulations that support this action, the Project would be designed and operated to meet or exceed the applicable requirements of the CALGreen Code and the City of Los Angeles Green Building Code. Furthermore, the Project would be subject to the 2022 Title 24 standards. Therefore, the Project would not conflict with this goal of the City's Green New Deal. |
| Reduce building energy use per sf for all building types 22% by 2025; 34% by 2035; and 44% by 2050 | The City would increase awareness of incentives and smart building energy management systems. An energy consumption report will be prepared to assess the energy-water nexus. | **No Conflict.** This action applies to the City. However, the Project would be designed and operated to meet or exceed the applicable requirements of the CALGreen Code and the City of Los Angeles Green Building Code. Therefore, the Project would not conflict with the City in achieving this goal of the City's Green New Deal. |
| **Focus Area: Housing and Development** | | |
| Ensure 57% of new housing units are built within 1500 ft of transit | The City would develop regulatory tools and strategies to encourage transit ridership and focus growth in | **No Conflict.** This action applies to the City. However, the Project would concentrate new residential uses in a |

**Table IV.E-7 (Continued)**
**Consistency with Applicable GHG Emissions Goals and Actions of the City's Green New Deal**

| Action | Description | Consistency Analysis |
|---|---|---|
| by 2025; and 75% by 2035 | housing near the North Hollywood Station, Van Nuys Station, Sepulveda Station, Reseda Station, and Sherman Way Station. New stations would also be added to the Purple Line from Downtown L.A. to UCLA.<br><br>This action reduces vehicle emissions by facilitating access to transit which can reduce single occupancy vehicle trips and help alleviate traffic congestion, and most importantly, reducing associated GHG emissions. | TPA. The Project Site is located in an area well-served by public transit and currently served by a total of 12 bus routes. Therefore, the Project would not conflict with the City in achieving this goal of the City's Green New Deal. |
| **Focus Area: Mobility and Public Transit** | | |
| Reduce VMT per capita by at least 13% by 2025; 39% by 2035; and 45% by 2050 | The City would update the Transportation Demand Management (TDM) ordinance and develop first/last mile infrastructure improvements around transit stations. TDM strategies would also be implemented consistent with the West Side Mobility Plan to east congestion. | **No Conflict.** This action applies to the City and the Project meets the City's current VMT threshold that targets significant reduction in VMT over business-as-usual. (See Section IV.K, Transportation, of this Recirculated Draft EIR.) To the extent the City pursues further reduction in VMT in the future, those reductions may come through other initiatives.<br><br>The Project would be located near mass transit stations to reduce vehicle trips. The Project would also promote a pedestrian-friendly community by placing residential uses within walking distance to office, retail, and entertainment uses.<br><br>The Project Site is located in an HQTA as designated by the 2020–2045 RTP/SCS. The Project would also provide bicycle parking spaces in accordance with LAMC requirements for Project residents, employees, and visitors. Therefore, the Project would not conflict with this goal of the City's Green New Deal. |
| Increase the percentage of electric and zero emission vehicles in the city to 25% by 2025; 80% by 2035; and 100% by 2050 | The City would increase electric vehicle ownership by providing rebates for used EVs and chargers, as well as promote trade-in events for electric vehicles. The City would also increase the number of EV charging stations by pursuing public-private partnerships in developing charging | **No Conflict.** This action applies to the City. However, the Project would support this policy since the Applicant would provide electric vehicle charging stations and electric vehicle supply wiring consistent with City requirements. Therefore, the Project would not conflict with the City in achieving this goal of the |

**Table IV.E-7 (Continued)**
**Consistency with Applicable GHG Emissions Goals and Actions of the City's Green New Deal**

| Action | Description | Consistency Analysis |
|---|---|---|
| | stations, streamline permitting processes for EV charger installations and update building codes to simplify EV charging requirements. | City's Green New Deal. |

[a] *CEC, 2019 Building Energy Efficiency Standards, Fact Sheet.*
*Source: Eyestone Environmental, 2023.*

that would introduce new residential, retail, restaurant, and office buildings (under Option B), within an HQTA. The Project Site is located in an area well-served by public transit provided by Los Angeles County Metropolitan Transit Authority, Los Angeles Department of Transportation Transit Commuter Express, Culver City Bus, and City of Santa Monica Big Blue Bus. Specifically, the Project Site is currently served by a total of 12 bus routes. Furthermore, the Project would comply with CALGreen Code, implement various project design features to reduce energy usage, including Project Design Feature GHG-PDF-1 and Project Design Feature WAT-PDF-1, and would comply with the City of Los Angeles Solid Waste Management Policy Plan, and the RENEW LA Plan in furtherance of the targets included in L.A.'s Green New Deal with regard to energy-efficient buildings and waste and landfills. The Project would also provide secure short- and long-term bicycle storage areas for Project employees, residents, and guests. **Therefore, the Project would be consistent with L.A.'s Green New Deal.**

*(iv) Post-2030 Analysis*

Studies show that the State's existing and proposed regulatory framework will put the State on a pathway to reduce its GHG emissions level to the statewide policy goal included in Executive Order B-30-15 of 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[111] Even though these studies did not provide an exact regulatory and

[111] *Energy and Environmental Economics (E3). Achieving Carbon Neutrality in California, PATHWAYS Scenarios Developed for the California Air Resources Board (October 2020) Mahone, Amber. The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed long-term scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. The model encompasses the entire California economy with detailed representations of the buildings, industry, transportation and electricity sectors.*

technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.

Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which requires that Statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. These targets would build upon those originally established under AB 32 which required reducing statewide GHG emissions to 1990 levels by 2020. As discussed above, SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. The Project's design features advance these goals by reducing VMT, as described in more detail above, and other sustainable features that increase the use of electric vehicles, improving energy efficiency, and reducing water usage.

The emissions modeling in the 2017 Update to the Scoping Plan has projected 2030 statewide emissions, which take into account known commitments (reduction measures) such as SB 375, SB 350, and other measures. The emissions inventory identified an emissions gap, meaning that emissions reductions due to known commitments do not decline fast enough to achieve the 2030 target. In order to fill this gap, the 2017 Update to the Scoping Plan assumed a scenario in which cap-and-trade would deliver the reductions necessary to achieve the 2030 emissions target. Although the Project is consistent with the 2017 Update to the Scoping Plan, additional measures to achieve the 2030 targets and beyond are outside of the City or the Project's control. While any evaluation of post-2030 Project emissions would be speculative, the Project would not preclude or impede the State from achieving the 2030 targets.

Executive Order S-3-05 establishes a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal, however, has not been codified. That being said, studies have shown that, in order to meet the 2050 target, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. In its 2008 Climate Change Scoping Plan, CARB acknowledged that the "measures needed to meet the 2050 goal are too far in the future to define in detail."[112] In the First Update to the Scoping Plan, however, CARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of

[112] *CARB, Climate Change Scoping Plan: A Framework for Change, December 2008., p. 117.*

efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately."[113]

Although the Project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the Project's emissions to decline as the regulatory initiatives identified by CARB in the Climate Change Scoping Plan are implemented, and other technological innovations occur. Stated differently, the Project's total emissions at build-out presented in Table IV.E-10 on page IV.E-78 in the analysis below, represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the State's environmental policy objectives. That inventory takes into account existing regulations and regulations that would apply to the Project at its build out year. As an example, the Project's GHG emissions associated with electrical usage would be reduced by an additional 10 percent in Year 2030 and to zero in 2050 since the electricity provider (LADWP) servicing the Project Site must generate electricity with 60 percent renewables in 2030 and 100 percent renewables by 2045 (SB 100). As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project would not conflict with the Executive Order's horizon-year (2050) goal. The Project is the type of land use development that is encouraged by the 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the State's long-term climate policies. As shown above, the reduction in VMT would further support the goal of reducing GHG emissions by 19 percent per capita from passenger vehicles by 2035 in the 2020–2045 RTP/SCS. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with State climate targets for 2030 and beyond.

For the reasons described above, the Project's post-2030 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

*(iv) Carbon Neutrality*

As discussed above, Executive Order B-55-18 establishes a new statewide goal to achieve carbon neutrality no later than 2045 and achieve and maintain net negative emissions thereafter. Based on this executive order, CARB would work with relevant State agencies to develop a framework for implementation and accounting that tracks progress

[113] *CARB, 2017 Scoping Plan Update, November 2017, p. 18.*

towards this goal, as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

Also discussed above, CARB has released a study evaluating three scenarios three scenarios that achieve Carbon Neutrality in California by 2045. The scenarios analyzed to achieve carbon neutrality include a High Carbon Dioxide Removal (CDR) scenario, Zero Carbon Energy scenario, and a Balanced scenario. Under each of these scenarios, CARB proposed reduction strategies for various sectors that contribute GHG emissions throughout the State. Table IV.E-8 on page IV.E-74 provides a summary of key emission reduction strategies required to achieve Carbon Neutrality by 2045. In addition, Table IV.E-8 demonstrates how the Project would be consistent or not conflict with these measures.

*(b) Project Emissions*

The CEQA Guidelines ask whether the Project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. This Recirculated Draft EIR estimates the GHG emissions associated with the Project for informational purposes only. These Project GHG emissions are not evaluated against a numeric or quantified threshold of significance.

The Project would result in direct and indirect GHG emissions generated by different types of emissions sources, including:

- Construction: emissions associated with demolition of the existing buildings and surface parking areas, shoring, excavation, grading, and construction-related equipment and vehicular activity;
- Area source: emissions associated with landscaping equipment and consumer products;
- Energy source (building operations): emissions associated with space heating and cooling, water heating, energy consumption, and lighting;
- Mobile source: emissions associated with vehicles accessing the Project Site;
- Stationary source: emissions associated with stationary equipment (e.g., emergency generators);
- Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and

**Table IV.E-8**
**Project Consistency with 2045 Carbon Neutrality Goals**

| Sector | Description | Consistency Analysis |
|---|---|---|
| Sector: Low Carbon Fuels | The State would use advanced biofuels for ground transportation, renewable aviation fuel and biomethane for electricity generation. Hydrogen may also be blended into pipeline gas demand as well as hydrogen for fuel cell transportation. | **No Conflict.** This action primarily applies to the transportation fuel providers. However, the Project would source transportation fuel from these providers that would comply with these reduction measures. |
| Sector: Buildings | The State would require 100 percent of sales of electric appliances by 2030 through 2040. | **No Conflict.** While the Project may include natural gas appliances, any purchases of appliances after 2030 would be consistent with State requirements. |
| Sector: Transportation | The State would require 100 percent Battery Electric Vehicle (BEV) sales for Light Duty Vehicles (LDV) and Medium Duty Vehicles (MDV) as early as 2030. Sales of Heavy Duty Vehicles (HDV) would achieve at least 45 percent BEV or CNG as early as 2035.<br><br>At least 50 percent of rail within the State would be electrified and 50 percent of in-state aviation be electrified. | **No Conflict.** Residents, employees and visitors of the Project purchasing vehicles within the State would comply with BEV or compressed natural gas (CNG) vehicle sales requirements. Therefore, the Project would not conflict with requirements on sales of BEV or CNG) powered vehicles.<br><br>In addition, the Project would install EV charging stations consisting of 10 percent of total parking spaces. |
| Sector: Industry and Agriculture | The State would require industry to be up to 53 percent electrified and up to 19 percent of energy to be met with hydrogen. Cement, glass, oil and gas industries would be required to achieve carbon capture of at least 14 MMT. Agricultural energy emissions would be reduced by at least 80 percent.<br><br>Oil and gas extraction and petroleum refining energy demand would be reduced by at least 90 percent. | **Not Applicable.** The Project would not include industrial or agricultural uses. |
| Sector: Electricity | Electricity generation within the state is fueled with natural gas, biomethane or hydrogen. At least 95 percent of electricity generation would be zero carbon. | **No Conflict.** This action primarily applies to the local power utility company (LADWP). However, the Project would source electricity from the LADWP that would comply with these reduction measures. |
| High GWP and Non-Combustion | Landfill and wastewater methane would be reduced by 23 percent. Pipeline fugitive emissions would be reduced by 72 percent, agricultural methane would be reduced by 41 percent and refrigerants would be reduced by 75 percent. Percent reductions are relative to Year 2020. | **No Conflict.** This action primarily applies to the local water utility (LADWP) and solid waste utility. However, the Project would source water from the LADWP and generate solid waste within the City of LA that would comply with these reduction measures. |

**Table IV.E-8 (Continued)**
**Project Consistency with 2045 Carbon Neutrality Goals**

| Sector | Description | Consistency Analysis |
|---|---|---|
| Sector: Carbon Dioxide Removal | At least 33 million metric tons/year of carbon dioxide removal needed in 2045. | **Not Applicable.** While this action primarily applies to the State, the Project would comply with this policy as required by current or future regulations. |

*Source: CARB, Achieving Carbon Neutrality in California, Table 1. October 2020; Eyestone Environmental, 2023.*

- Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

The Project would generate an incremental contribution to and cumulative increase in GHG emissions. A specific discussion regarding potential GHG emissions associated with the construction and operational phases of the Project is provided below.

*(i) Construction*

As described in Section II, Project Description, of this Recirculated Draft EIR, construction of the Project under both Option A and Option B is anticipated to occur in one phase and be completed in 2027.[114] Construction of the Project, which would be approximately 41 months, would commence with removal of the existing buildings and the existing surface parking areas, followed by grading and excavation for the subterranean parking garages. Building foundations would then be laid, followed by building construction, paving/concrete installation, and landscape installation. It is estimated that approximately 241,800 cubic yards and 251,000 cubic yards of soil would be hauled from the Project Site during the excavation phase under Option A and Option B, respectively. For additional construction assumptions, refer to Appendix B of this Recirculated Draft EIR.

The emission of GHGs associated with construction of the Project were calculated for each year of construction activity. A summary of GHG emissions for each year of construction under each Project option is presented in Table IV.E-9 on page IV.E-76. As presented in Table IV.E-9, construction of the Project is estimated to generate a total of 13,053 $MTCO_2e$ under Option A and 13,445 $MTCO_2e$ under Option B. As recommended

[114] *It is noted that while the Project is anticipated to be completed in 2027, this analysis maintains a buildout of 2026 to provide a conservative analysis.*

**Table IV.E-9**
**Construction-Related Emissions**
**($MTCO_2e$)**

| Year | $MTCO_2e$[a] |
|---|---|
| Option A | |
| 2023 | 3,353 |
| 2024 | 5,126 |
| 2025 | 3,168 |
| 2026 | 1,406 |
| Total: | 13,053 |
| Amortized Over 30 Years | 435 |
| Option B | |
| 2023 | 3,443 |
| 2024 | 5,442 |
| 2025 | 3,163 |
| 2026 | 1,397 |
| Total: | 13,445 |
| Amortized Over 30 Years | 448 |

[a] *$CO_2e$ was calculated using CalEEMod and the results are provided in Section 2.0 of the Construction CalEEMod output file within Appendix B of this Recirculated Draft EIR. It is noted that while the Project is anticipated to be completed in 2027, this analysis maintains a buildout of 2026 to provide a conservative analysis.*

*Source: Eyestone Environmental, 2023.*

by SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) in order to determine the Project's annual GHG emissions inventory.[115] This results in annual Project construction emissions of 435 $MTCO_2e$ under Option A and 448 $MTCO_2e$ under Option B. A complete listing of the construction equipment by on-site and off-site activities, duration, and emissions estimation model input assumptions used in this analysis is included within the emissions calculation worksheets that are provided in Appendix B of this Recirculated Draft EIR.

[115] *SCAQMD Governing Board Agenda Item 31, December 5, 2008.*

*(ii) Operation*

Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment and consumer products. As shown in Table IV.E-10 on page IV.E-78, the Project, at full buildout with Project Design Features, is expected to result in 52 $MTCO_2e$ per year under Option A and 51 $MTCO_2e$ per year under Option B from area sources.

Electricity and Natural Gas Generation Emissions

GHGs are emitted as a result of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits $CO_2$ and other GHGs directly into the atmosphere; when this occurs in a building, it is a direct emission source associated with that building. GHGs are also emitted during the generation of electricity from fossil fuels. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Electricity and natural gas emissions were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG intensity factors for LADWP were selected in CalEEMod. The carbon intensity (lbs/MWh) for electricity generation was calculated for the Project buildout year based on LADWP projections; as LADWP projections are not calculated for every year, straight line interpolation was performed to estimate the LADWP carbon intensity factor for the Project buildout year based on Year 2020 and 2035 data.[116]

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 standards (e.g., HVAC system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 standards.

[116] *LADWP, 2016 Power Integrated Resource Plan.*

**Table IV.E-10**
**Annual GHG Emissions Summary (Buildout)**
**(metric tons of carbon dioxide equivalent [$MTCO_2e$])**[a]

| Scope | Project without Project Design Features | Project with Project Design Features | Reduction from Project Design Features |
|---|---|---|---|
| Option A | | | |
| Area[b] | 52 | 52 | 0 |
| Energy[c] | 1,226 | 1,226 | 0 |
| Mobile[d] | 2,765 | 1,612 | (1,153) |
| EV Chargers[e] | (316) | (316) | 0 |
| Stationary[f] | 275 | 275 | 0 |
| Solid Waste[g] | 33 | 33 | 0 |
| Water/Wastewater[h] | 47 | 47 | 0 |
| Refrigerants | 4 | 4 | 0 |
| Construction | 435 | 435 | 0 |
| **Total Emissions** | **4,521** | **3,368** | **(1,153)** |
| Option B | | | |
| Area[b] | 51 | 51 | 0 |
| Energy[c] | 1,470 | 1,470 | 0 |
| Mobile[d] | 3,750 | 1,333 | (2,417) |
| EV Chargers[e] | (318) | (318) | 0 |
| Stationary[f] | 275 | 275 | 0 |
| Solid Waste[g] | 35 | 35 | 0 |
| Water/Wastewater[h] | 69 | 69 | 0 |
| Refrigerants | 6 | 6 | 0 |
| Construction | 448 | 448 | 0 |
| **Total Emissions** | **5,787** | **3,370** | **(2,417)** |

*Numbers may not add up exactly due to rounding.*

[a] *$CO_2e$ was calculated using CalEEMod and the results are provided in Section 2.0 of the Operation CalEEMod output file within Appendix B of this Recirculated Draft EIR. Totals may not add up due to rounding.*

[b] *Area source emissions are from landscape equipment. Emissions were calculated consistent with requirements of Project Design Feature GHG-PDF-2.*

[c] *Energy emissions account for implementation of City Ordinance 187714, which requires all newly constructed buildings to be all electric. Emissions from electricity generation only take into account carbon intensity at build out year and do not take into account decreasing carbon intensity in subsequent years required by SB 100 (RPS). However, it is recognized that the RPS would require utilities to supply 100 percent renewable energy by 2045.*

[d] *Emissions were calculated with CalEEMod which includes EMFAC2014 emission factors. EMFAC2014 does not take account for further reductions in GHG emission as the result of implementation of LCFS amendments. Mobile source emissions also do not account for increasing fuel economy standards for future years. The reduction in mobile source emissions accounts for project features such as increased density and proximity to transit, which would reduce VMT and*

**Table IV.E-10 (Continued)**
**Annual GHG Emissions Summary (Buildout)**
**(metric tons of carbon dioxide equivalent [$MTCO_2e$])**

| Scope | Project without Project Design Features | Project with Project Design Features | Reduction from Project Design Features |
|---|---|---|---|
| *associated fuel usage in comparison to free-standing sites. This reduction in VMT was calculated within the LADOT VMT Calculator.* | | | |
| [e] *Emissions were calculated consistent with the City requirements and reflect the overall reduction in GHG emissions from the use of EV chargers (electricity required to charge vehicles versus less use of gas and diesel vehicles).* | | | |
| [f] *Stationary source emissions are from an on-site emergency generator.* | | | |
| [g] *Solid waste emissions are calculated based on CalEEMod default solid waste generation rates.* | | | |
| [h] *Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates. The CalEEMod estimate of water consumption is considered conservative compared to more current water demand rates used by LADWP, which are reflected in Section IV.M.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Recirculated Draft EIR.* | | | |
| *Source: Eyestone Environmental, 2023.* | | | |

The Project would be required to comply with the City's All-Electric ordinance which does not allow installation of natural gas-powered equipment (stoves, water heaters, space heating) for new construction with some exceptions. Restaurant uses would be exempt from this ordinance and be allowed to consume natural gas for cooking purposes. While this would decrease the natural gas usage for the Project, electricity usage would increase as a result.

The California Energy Commission (CEC) has conducted various energy surveys to develop energy consumption estimates for electric and natural gas end uses. Data from these surveys was used to calculate the equivalent electricity usage when switching from a natural gas end use, such as cooking, water heating and space heating.[117] As mentioned above, restaurant cooking uses are exempt from the All-Electric ordinance and were assumed to be powered by natural gas. CalEEMod by default, assumes sources typically powered by natural gas include space heating, water heating, dryers and cooking. Electricity usage rates for these sources (space heating, water heating, dryers and cooking) were obtained from the CEC 2019 RASS and Commercial Forecast to calculate equivalent electricity usage for the Project. While the analysis accounts for current energy efficiency regulations, future and proposed regulations have not been taken into account. As an example, energy usage and resulting GHG emissions would be reduced by RPS under SB 100 which requires 100-percent renewable energy by 2045. The requirements of SB 100 would reduce the Project's energy related GHG emissions by 100 percent by 2050.

[117] *CAPCOA Handbook, Table E-15.1 and Table E-15.2*

Therefore, it is expected that Project energy-related GHG Emissions would comply with the goals of AB 32 and SB 32.

The Project would implement a number of project design features that would reduce Project energy consumption, including Project Design Feature GHG-PDF-1, which would require the Project to incorporate features to further reduce overall energy usage.

As shown in Table IV.E-10 on page IV.E-78, the Project, at full buildout with incorporation of project design features, is expected to result in 1,226 $MTCO_2e$ per year under Option A and 1,470 $MTCO_2e$ per year under Option B from electricity and natural gas usage (restaurant use). The Project's electricity and natural gas GHG emissions takes into account project design features such as Project Design Feature GHG-PDF-1, which promote consistency with 2022 Title 24 standards. However, while Project Design Feature GHG-PDF-1 contains measures that exceed Title 24 requirements, no credits were taken for these measures. Refer to Appendix B of this Recirculated Draft EIR for the supporting calculations that reflect the emission reduction measures.

Mobile Source Emissions

Mobile-source emissions were calculated using the SCAQMD-recommended CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and VMT.

Mobile source operational GHG emissions were calculated using CalEEMod based on the Project trip-generation estimates provided in the Transportation Study prepared for the Project and included as Appendix J of this Recirculated Draft EIR.[118] As discussed in Section IV.K, Transportation, of this Recirculated Draft EIR, the LADOT VMT Calculator was used to calculate Project VMT and trip estimates based on the number of residential units and amount of building area for the commercial retail, restaurant, and office uses.

As discussed above, the Project design also includes characteristics that would reduce trips and VMT as compared to a project without VMT reducing measures within the Air Basin. The Project represents an infill development within an existing urbanized area that would introduce new residential, retail, restaurant, and office usess (Option B), within a SCAG-designated HQTA. As shown in Appendix B of this Recirculated Draft EIR, incorporation of USEPA MXD VMT reduction features applicable to the Project results in a

[118] *Linscott Law & Greenspan, Transportation Assessment for the Paseo Marina Project, July 2021. Note: CalEEMod analysis for Option B overstates daily trips and VMT in comparison to the Transportation Assessment (5,589 versus 5,574 daily trips and 45,271 versus 45,178 VMT).*

19.4-percent reduction in overall VMT and resultant GHG emissions under Option A. The Project results in an 18.8-percent reduction under Option B (35-percent reduction with incorporation of Mitigation Measure TR-MM-1) in overall VMT and resultant GHG emissions.

As shown in Table IV.E-10 on page IV.E-78, Project with Project Design Features (e.g., increased density and proximity to transit), GHG emissions from mobile sources would result in 1,612 $MTCO_2e$ per year under Option A, which accounts for a 1,153-$MTCO_2e$-per-year reduction associated with accessibility to mass transit and proximity to other commercial and entertainment uses in comparison to the Project without Project Design Features (2,765 $MTCO_2e$ per year). Project with Project Design Features GHG emissions from mobile sources would result in 1,333 $MTCO_2e$ per year under Option B, which accounts for a 2,417 $MTCO_2e$-per-year reduction associated with accessibility to mass transit and proximity to other commercial and entertainment uses in comparison to the Project without Project Design Features (3,750 $MTCO_2e$ per year). Refer to Appendix B of this Recirculated Draft EIR for the supporting calculations that reflect the emission reduction measures.

The Project's GHG emissions inventory does not take into account future regulations to reduce VMT and vehicle GHG emissions. As discussed above, SB 375 requires CARB to adopt VMT reduction targets for the SCAG region every eight years. It is expected that future VMT reduction targets would be more stringent in order to meet AB 32 and SB 32 GHG reduction targets. In addition, fuel efficiency for vehicles is expected to increase in future years beyond the buildout year (2027) under the CAFE standards, resulting in fewer Project-related mobile source GHG emissions. Also, Governor Newsom has issued an executive order to require all new passenger cars and trucks sold to be zero-emission vehicles by 2035.[119] Based on the CalEEMod default vehicle fleet mix for the South Coast Air Basin, approximately 80 percent of the Project's trips are attributed to passenger cars and trucks. As gasoline and diesel fueled passenger vehicles will be phased out starting in 2035, GHG emissions from the Project's mobile sources could be reduced by 80 percent by 2050. Although specific details regarding future VMT and GHG reduction measures are not yet known, it is expected that Project mobile-source GHG emissions would comply with the goals of AB 32 and SB 32.

Stationary Source Emissions

Emissions related to stationary sources were calculated using the CalEEMod emissions inventory model. It is anticipated that the Project would include an emergency

[119] *State of California, Executive Order N-79-20, September 23, 2020.*

generator on-site. As shown in Table IV.E-10 on page IV.E-78, the Project scenario is expected to result in 275 $MTCO_2e$ per year from stationary sources under both options.

Solid Waste Generation Emissions

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors provided in Section 2.4 of USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each applicable land use were selected for this analysis. As shown in Table IV.E-10, Project GHG emissions from solid waste generation would result in a total of 33 $MTCO_2e$ per year under Option A and 35 $MTCO_2e$ under Option B, which accounts for a 76-percent recycling/diversion rate.

The Project's GHG emissions inventory does not take into account solid waste diversion rates and recycling legislation in future years anticipated beyond Project buildout (Year 2027). Such legislation includes AB 1826 which requires commercial uses to recycle a specific amount of organic waste. Although AB 1826 is currently enforced, specific details regarding waste diversion are not yet known and not accounted for in the Project's GHG emissions inventory. However, it is anticipated that AB 1826 would reduce the amount of solid waste sent to landfills and thereby reducing the Project's GHG emissions in future years.

Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water and wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water; these include: (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused as reclaimed water.

Emissions related to water usage and wastewater generation were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor[120] to determine the embodied energy necessary to supply potable water. GHG emissions are then calculated based on the amount of electricity consumed, multiplied by the GHG intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG intensity factors for LADWP were selected in CalEEMod. Water usage rates were calculated consistent

[120] *The intensity factor reflects the average pounds of $CO_2e$ per megawatt generated by a utility company.*

with the requirements under City of Los Angeles Ordinance No. 184,248, 2016 California Plumbing Code, 2019 CALGreen Code, 2017 Los Angeles Plumbing Code, and 2020 Los Angeles Green Building Code, and reflect an approximately 20-percent reduction as compared to the base demand per LEED Silver® requirements. Base water use demand is determined by the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code.

The Project's GHG emissions inventory does not take into account future water conservation measures. Although specific details are not yet known, it is anticipated that future water conservation measures would be more stringent in the future. Recently enacted legislation include Senate Bill 606 and Assembly Bill 1668, which serve as a roadmap to establish water conservation targets and reduce water usage beyond what is currently accounted for in the Project's GHG emissions inventory.[121] Also, GHG emissions from water usage is based on electricity used for treatment and conveyance. Based on CalEEMod outputs for the Project, electricity usage for water and wastewater treatment comprises approximately 85 percent of the GHG emissions related to water consumption. As discussed above, SB 100 would require 100 percent renewable energy (electricity) within the State by 2045. As energy usage would be 100 percent renewable by 2045, the Project's water consumption GHG emissions could potentially be reduced by 85 percent by 2050.

As shown in Table IV.E-10 on page IV.E-78, Project with Project Design Features GHG emissions from water/wastewater usage would result in a total of 47 and 69 $MTCO_2e$ per year under Option A and Option B, respectively and accounts for a 20-percent reduction in water/wastewater emissions with implementation of Project Design Feature WAT-PDF-1 provided in Section IV.M.1, Utilities and Service Systems—Water Supply and Infrastructure, of this Recirculated Draft EIR. Please refer to Appendix B of this Recirculated Draft EIR for the supporting calculations that reflect the emission reduction measures.

*(iii) Combined Construction and Operational Impacts*

As shown in Table IV.E-10, when taking into consideration implementation of relevant project design features, as well as the requirements set forth in the City of Los Angeles Green Building Code, and full implementation of current State mandates, the Project's GHG emissions for the Project under Option A in 2026[122] would equal 435 $MTCO_2e$ per year (amortized over 30 years) during construction and 2,933 $MTCO_2e$

[121] *California Department of Water Resources. Fast Facts on the Water Conservation Legislation.*

[122] *It is noted that while the Project is anticipated to be completed in 2027, this analysis maintains a buildout of 2026 to provide a conservative analysis.*

per year during operation of the Project with a combined total of 3,368 $MTCO_2e$ per year. The Project's GHG emissions for the Project under Option B in 2026 would equal 448 $MTCO_2e$ per year (amortized over 30 years) during construction and 2,921 $MTCO_2e$ per year during operation of the Project with a combined total of 3,370 $MTCO_2e$ per year. It should be noted that the Project's GHG emissions inventory was presented for informational purposes only. The emissions inventory and analysis demonstrate that the Project incorporates GHG-reducing measures.

As discussed above, the Project's GHG emissions inventory does not take into account future regulations and legislation to reduce GHG emissions. The Project's energy related GHG emissions could potentially be reduced by 100 percent (eliminated), mobile source GHG emissions could be reduced by 80 percent, and water consumption GHG emissions potentially reduced by 85 percent. Although specific details of future regulations are not yet known, the Project's GHG emissions are expected to be consistent with the goals of AB 32 in future years.

*(c) Conclusion*

In summary, the Project's location, land use characteristics, and design render it consistent with statewide and regional climate change mandates, plans, policies, and recommendations. More specifically, the plan consistency analysis provided above demonstrates that the Project complies with or exceeds the plans, policies, regulations and GHG reduction actions/strategies outlined in CARB's Climate Change Scoping Plan and subsequent updates, SCAG's 2020–2045 RTP/SCS, and L.A.'s Green New Deal. As the Project would not conflict with relevant plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs, impacts related to regulatory consistency would be less than significant. **Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not result in a significant impact on the environment. Therefore, Project-specific impacts with regard to climate change would be less than significant.**

## (2) Mitigation Measures

Project-level impacts related to GHG emissions would be less than significant. Therefore, no mitigation measures are required.

### (3) Level of Significance After Mitigation

Project-level impacts related to GHG emissions were determined to be less than significant without mitigation. Therefore, no mitigation measures were required or included, and the impact level remains less than significant.

## e. Cumulative Impacts

### (1) Impact Analysis

As explained above, the analysis of a project's GHG emissions is inherently a cumulative impacts analysis because climate change is a global problem and the emissions from any single project alone would be negligible. Accordingly, the analysis above took into account the potential for the Project to contribute to the cumulative impact of global climate change. Table IV.E-10 on page IV.E-78 illustrates that implementation of the Project's regulatory requirements and project design features, including State mandates, would contribute to GHG reductions. These reductions support State goals for GHG emissions reduction.

The analysis shows that the Project is consistent with CARB's Climate Change Scoping Plan, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. The Project is also consistent with SCAG's 2020–2045 RTP/SCS' regulatory requirements to reduce regional GHG emissions from the land use and transportation sectors by 2035. Furthermore, the Project would generally comply with the aspirations of L.A.'s Green New Deal, which includes specific targets related to housing and development, and mobility and transit. Given the Project's consistency with statewide, regional, and local plans adopted for the reduction of GHG emissions, it is concluded that the Project's incremental contribution to GHG emissions and their effects on climate change would not be cumulatively considerable. **For these reasons, the Project's cumulative contribution to global climate change is less than significant.**

### (2) Mitigation Measures

Cumulative impacts related to GHG emissions would be less than significant. Therefore, no mitigation measures are required.

### (3) Level of Significance After Mitigation

Cumulative impacts related to GHG emissions were determined to be less than significant without mitigation. Therefore, no mitigation measures were required, and the impact level remains less than significant.